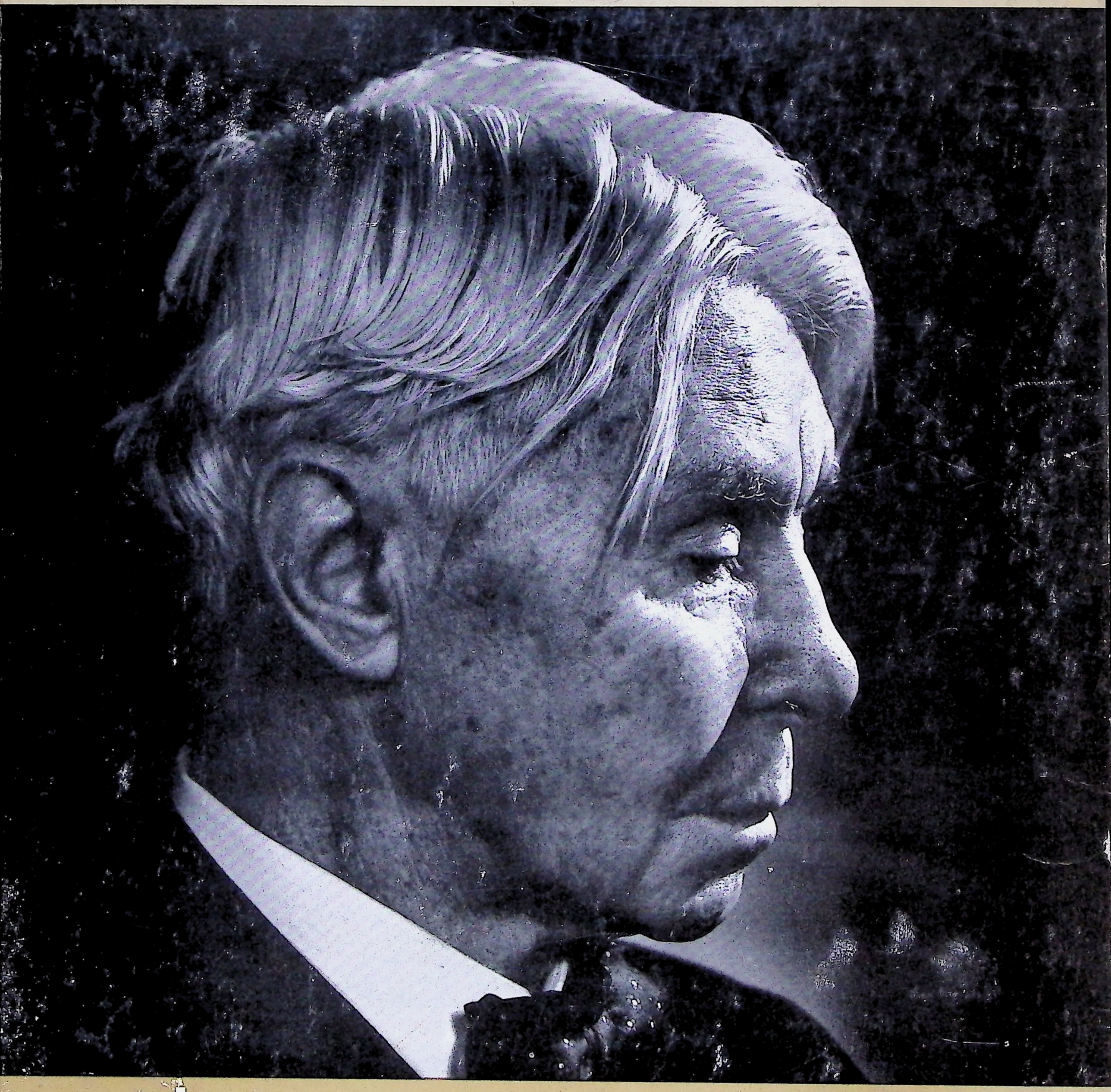
# WISDOM

THE MAGAZINE OF KNOWLEDGE FOR LIFETIME LEARNING AND EDUCATION



POET-HISTORIAN CARL SANDBURG

Portrait by Karsh of Ottawa

LIMITED EDITION

## WISDOM OF THE ENCYCLOPEDIA AMERICANA

AND OTHER TIMELESS ARTICLES MAGNIFICENTLY ILLUSTRATED

# WISDOM

THE MAGAZINE OF KNOWLEDGE FOR LIFETIME LEARNING AND EDUCATION

LEON GUTTERMAN
Editor and Publisher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*The following articles, condensed from The Encyclopedia Americana, were written by the world's greatest educators, scholars, and eminent authorities in every field of human knowledge.*

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BETTY-JANE LANG, *Editorial Director*
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# A LETTER FROM THE PUBLISHER

LEON GUTTERMAN, EDITOR AND PUBLISHER

THE expression "Knowledge is power" is used by Francis Bacon; but it had its origin long before his time, in the saying of Solomon, that "A wise man is strong; yea, a man of knowledge increaseth in strength." Socrates said, "Know thyself"—that a knowledge of our own ignorance is the first step toward true knowledge. And Coleridge said, "We cannot make another comprehend our knowledge until we first comprehend his ignorance." "Knowledge," said Bacon, "is power"; but mere knowledge is not power; it is only possibility. Action is power; and its highest manifestation is when it is directed by knowledge.

The desire for knowledge, like the thirst for riches, increases with the acquisition of it. Pleasure is a shadow, wealth is vanity, and power a pageant; but knowledge is ecstatic in enjoyment, perennial in fame, unlimited in space, and infinite in duration. Alexander the Great so valued learning that he used to say he was more indebted to Aristotle for giving him knowledge than to his father Philip for giving him life.

All wish to possess knowledge and education, but few are willing to pay the price. Knowledge, like religion, must be experienced in order to be known. Real knowledge, like everything else of value, is not to be obtained easily. It must be worked for, studied for, thought for, and prayed for. Education is not learning; it is the exercise and development of the powers of the mind; and the two great methods by which this end may be accomplished are in the halls of learning, or in the conflicts of life.

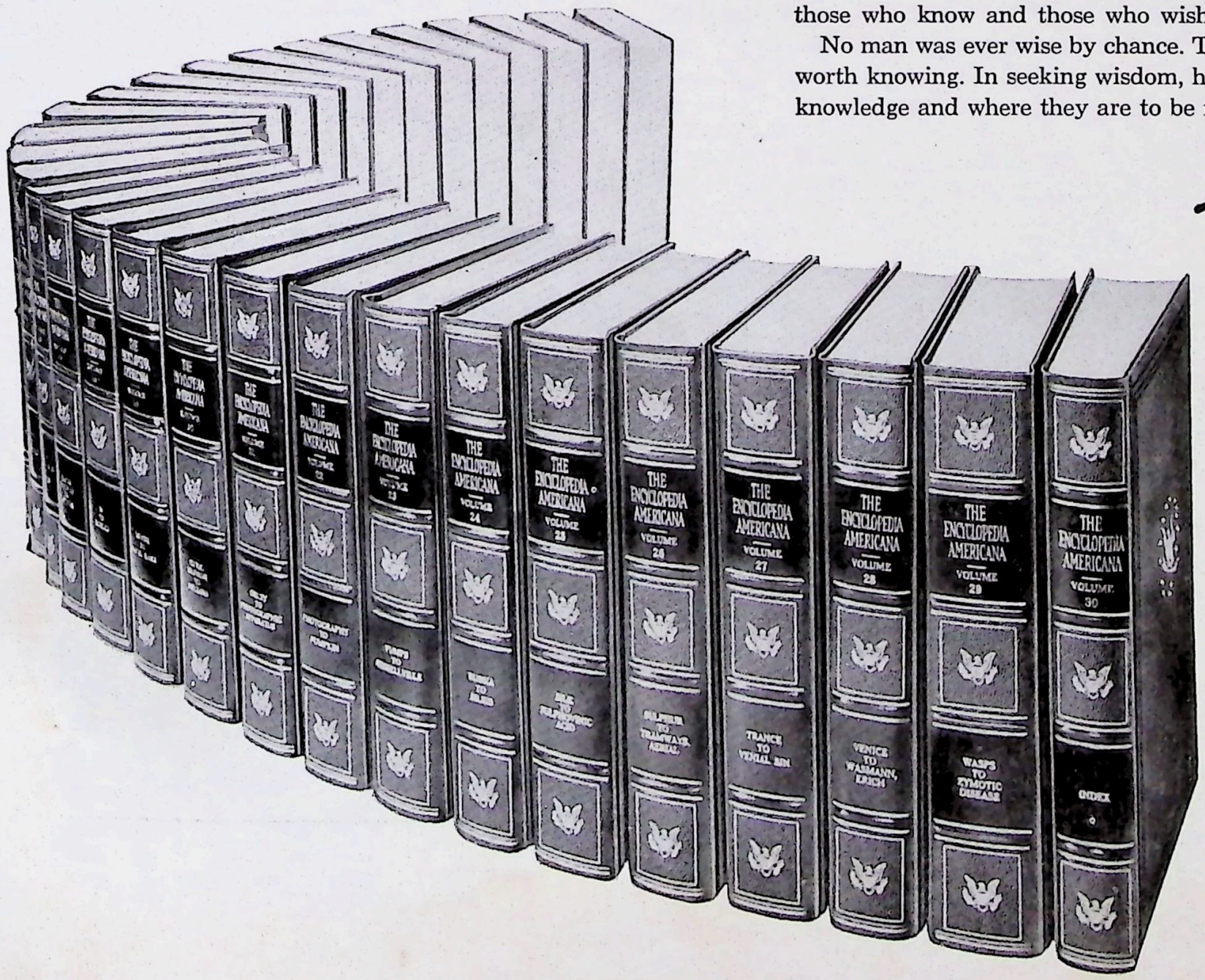
Knowledge without common sense is folly; without method it is waste; without kindness it is fanaticism; without religion it is death. But with common sense, it is wisdom; with method it is power; with charity it is beneficence; with religion, it is virtue, life and peace. Knowledge has, in our time, triumphed, and is triumphing, over ignorance, over prejudice, and over bigotry. The whole world is becoming a common field for human intellect to act in.

What we know here is very little, but what we are ignorant of is immense. Therefore, it is wise to get knowledge and learning from every source. It is on the sound education of the people that the security and destiny of every nation rests. A man or woman cannot leave a better legacy to the world than a well-educated family.

This issue of WISDOM pays tribute to one of the finest, most inspiring sources of knowledge available to everyone today—the great reference work of international scope—THE ENCYCLOPEDIA AMERICANA. The new edition is an outstanding achievement in American encyclopedia history. For 130 years THE AMERICANA has been dedicated to providing a vast store of priceless knowledge in every field of human thought and endeavor. In 30 magnificent volumes filled with sound scholarship and practical usefulness, THE AMERICANA incorporates all that has been learned with impartiality, accuracy, and comprehensiveness, and represents the experience, ideas, knowledge, and wisdom of thousands of distinguished educators and scholars, writers and editors, eminent contributors and advisers in all fields of education—bringing together those who know and those who wish to know.

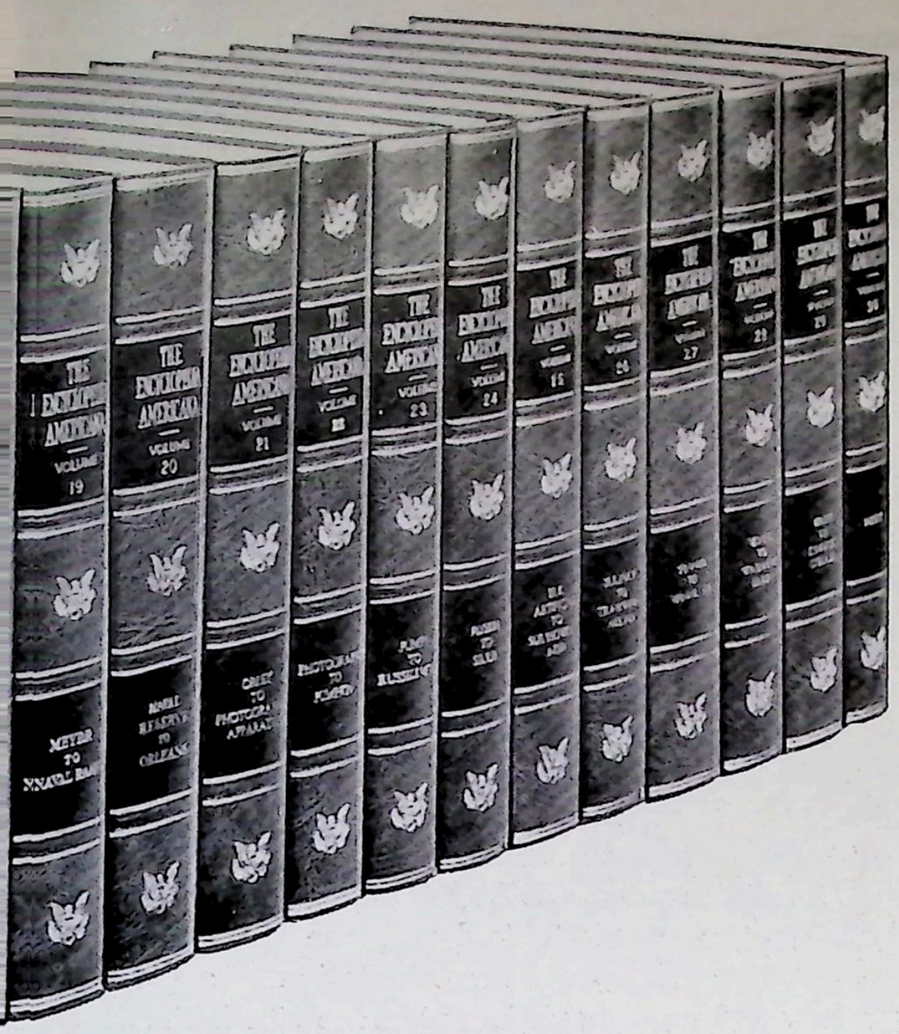
No man was ever wise by chance. True wisdom is to know what is best worth knowing. In seeking wisdom, he is wise who knows the sources of knowledge and where they are to be found. Dare to be wise!

Leon Gutterman



THE WISDOM MAGAZINE AWARD, *conferred upon* THE ENCYCLOPEDIA AMERICANA *for "Significant Contributions to Knowledge and Distinguished Service to American Education," is accepted by Edward J. McCabe, Jr. (left), President of The Grolier Society, Dr. Lavinia P. Dudley, Executive Editor of* THE AMERICANA, *and Vincent E. Sutliff, President of The Americana Corporation.*

*The* WISDOM SEAL OF APPROVAL *has been awarded to* THE ENCYCLOPEDIA AMERICANA.



# THE STORY OF THE ENCYCLOPEDIA AMERICANA

*from the Wisdom of Encyclopedia Americana*

THE ENCYCLOPEDIA AMERICANA'S *30 volumes, lined up on a bookshelf, are indeed handsome and impressive. 14,500 illustrations—26,000 pages—29,000,000 words. But The Americana's size and beauty—imposing as they are—provide merely the framework for its outstanding attribute—*EDITORIAL QUALITY. *Educators, librarians, and exacting parents too, know that it takes far more than cloth and paper and printed words to build this world-famous reference set. They know that only an inspired editorial program, carried out to practical perfection by a large staff of encyclopedia specialists, could possibly have achieved* AMERICANA *standards of comprehensiveness, clarity, accuracy, and objectivity.* THE ENCYCLOPEDIA AMERICANA *of today is the brilliant result of 130 years of research, scholarship, and publishing enterprise. In a very real sense, it is a native American product, reflecting the burgeoning life and cultural evolution of the people of America themselves. This unrivalled heritage gives* THE AMERICANA *a special prestige among general reference works. Often emulated but never equalled,* THE AMERICANA *has pioneered many significant advances in encyclopedia coverage and presentation.* THE AMERICANA *story, covering more than a century and a quarter of successful publishing experience, dramatically reveals how an idea, implemented by courage, initiative, collective endeavor, and strict adherence to the highest editorial principles, can produce an encyclopedia which so eminently satisfies the real needs of those who demand the best.*

AN ENCYCLOPEDIA is a work aiming to give a comprehensive summary of all branches of knowledge. Such works are frequently called "general encyclopedias" to distinguish them from "special encyclopedias" which are limited to a single field or group of allied fields of knowledge. Encyclopedias usually consist of articles on separate subjects arranged in dictionary or alphabetic order to facilitate use. Classified arrangement, or a combination of alphabetic and classified arrangement is sometimes used. The Greek words *enkyklios* (in a circle) and *paideia* (education) signified "the circle of learning; a general course of instruction," or "the circle of arts and sciences; the general education preceding professional studies." The word encyclopedia continued in use in this sense during the Middle Ages. The first work generally known to have been published with the word encyclopedia used in the title in the modern sense was *Encyclopaedia Septem Tomis Distincta* (1630) by Johann Heinrich Alsted.

Variant of spellings other than encyclopedia are commonly used. For example, encyclopaedia; cyclopaedia; cyclopedia formerly also encyclopedy; encyclopedie; encyclopaedy. The usual British spelling is encyclopaedia. Cyclopaedia and cyclopedia are shortened forms. Cyclopedia is in common use in titles of books published in the United States.

Denis Diderot wrote in 1784: "The aim of an encyclopaedia is to gather together the knowledge scattered over the face of the earth, to set forth its general plan to the men with whom we live and to transmit it to the men who will come after us, in order that the labors of past centuries may not have been in vain in those that follow; that our children, better informed, may at the same time become happier, and that we may not die without deserving well of mankind." Encyclopedia makers of the 20th century not only accomplish the purposes enunciated by Diderot but do much more to make the encyclopedia a vital tool to meet the needs of modern life.

Well into the 19th century the best encyclopedias were largely collections of monographs written by specialists for other specialists. Universal education has multiplied a millionfold the number of potential users of reference books. Schools and libraries have their reference collections for the studious and the curious, and every year thousands of sets of encyclopedias are sold and placed in the homes of average citizens. The general encyclopedia, which is the hub of all reference collections, large or small, must be so oriented that it fits the reading skills and intelligence of the average user. Even the most complicated and technical topic must be so presented that it can be readily understood by the reader without technical training. The good modern encyclopedia is an important avenue to the humanization of knowledge.

Two characteristics marked the early compilations now recognized as the precursors of the modern encyclopedia. First, they were the work

of a single author, not the product of cooperative scholarship; they consisted of the compiler's own descriptions and interpretations of the things and ideas described. Second, they were designed, not for reference use, but as treatises to be used primarily for instruction.

Authorities vary in designating the author of the first encyclopedia. Among the ancient Greeks the honor has been accorded both to Speusippus (c.339 B.C.) and to Aristotle (384–322 B.C.), both disciples of Plato. Although only fragments remain of the writings of Speusippus, he is known to have compiled an encyclopedic classification of plants and animals. Aristotle produced a large number of writings designed to summarize the knowledge and thought of his generation. His primary purpose was to provide a series of connected treatises (the whole circle of knowledge) for the use of his disciples.

Marcus Terentius Varro (116–27 B.C.) was reputed to be the most scholarly and voluminous of Roman writers. A contemporary of Julius Caesar, he was involved in the tempestuous political changes of his time, and spent much of his early manhood soldiering or in exile, but after the formation of the Second Triumvirate, he was able to settle down to a long period of literary production. Most of his works have been lost, but he is known to have produced *Disciplinarum Libri IX*, dealing with the liberal arts, including rhetoric, mathematics, astrology, medicine, music, and architecture. Another encyclopedic work was *De Forma Philosophiae Libri III*. He also compiled *Imagines*, a collection of biographies of seven hundred Greeks and Romans. An early compilation which conforms more nearly to our conception of an encyclopedia is Pliny the Elder's (23–79 A.D.) *Historiae Naturalis*, a collection of thousands of facts and fables from some hundreds of authors. The work consists of 37 books in classified groups, devoted to geography, ethnography, zoology, including man, botany, medical botany, and mineralogy. Pliny did not discriminate between fact and legend, and mixed sound science with old wives' tales. His work was popular for centuries and went through many editions during the Middle Ages.

Isidore, Bishop of Seville (c.560–636), described by one authority as the "originator of the encyclopaedia, the first to compile a summa of available knowledge" attempted in his *Originum sive Etymologiarum Libri XX* to cover terms in every branch of knowledge from chronology to natural history. The chief value of his work was the preservation of all available vestiges of Greek and Roman culture. The *Etymologiarum* remained popular during many centuries and was translated into various European languages. It is often called the encyclopedia of the Middle Ages.

Another cyclopedic work of the Middle Ages was William Caxton's *Myrrour of the World* (1481) a translation from the French of Vincent of Beauvais, and one of the earliest encyclopedias in English.

The first notable example of alphabetic arrangement in an encyclopedic work in English was John Harris' *Lexicon Technicum;* or *An universal English dictionary of arts and sciences, explaining not only the terms of art, but the arts themselves* (1704) in one volume, with a second edition in two volumes (1708-1710). Its emphasis was on mathematics and the physical sciences. It omitted theology, biography, and poetry. The inclusion of Sir Isaac Newton's treatise on acids and the mention of authorities in some of the articles were novel features in encyclopedia making, and ushered in the use of expert contributors as well as the citation of bibliographies.

A milestone in the development of the encyclopedia in England was Ephraim Chambers's *Cyclopaedia or, An Universal Dictionary of Arts and Sciences, containing an explanation of the terms and an account of the things signified thereby in the several arts, liberal and mechanical, and the several sciences, human and divine* (1728). As the later Chambers's *Encyclopaedia* (1st ed. 1860–1868) was based on the German Brockhaus' *Konversations-Lexikon*, this early *Chambers's*, not to be confused with its 19th century namesake, was the basis of the French *Encyclopédie*. The contribution of Chambers to the progress of encyclopedia building was his policy of drawing upon others for contributions and providing a workable system of cross references.

*The Encyclopedia Americana* was first published in 13 volumes, commencing in 1829, by the firm of Carey, Lea and Carey of Philadelphia, then America's leading publishers. The members of this firm were themselves distinguished intellectual leaders in the early life of the republic. Mathew Carey, the founder, was one of the fathers of the American nationalist school of economics, along with Alexander Hamilton. Henry C. Carey, his son, became even more famous as an economist. The other partner, Mathew's son-in-law Isaac Lea, was a naturalist who later served as president of the American Association for the Advancement of Science.

*Americana's* first editor, Dr. Francis Lieber, one of the most influential scholars of his century in America, was a man who felt a deep sense of obligation to serve America faithfully. A graduate of the University of Jena, Lieber had come to America in 1827 to escape the despotism of his native Prussia, after serving valorously in the campaigns that led to Napoleon's defeat at Waterloo. His reputation as a scholar had preceded him to the shores of the New World, and he was warmly welcomed on his arrival by many eminent men of learning.

Lieber's dream was to provide this new country with a reference work built to meet American needs. The United States was, at that time, a nation of approximately 12 million people—settled mostly in rural areas east of the Appalachian Mountains. Those were the days before a free public school system had been established. Many people could neither read nor write. Most of the books in America came from England. Book publishing was, for the most part, more a hobby than a commercially profitable project. Lieber's problem was to find someone willing and able to make the large investment required for publication of a great new encyclopedia for a new and growing nation, someone who believed in the future of America.

Fired by Lieber's enthusiasm, Carey, Lea and Carey invested $20,000, a huge sum for those days, so that work on the new encyclopedia could be started at once. It was really an investment in the future of America, a great gamble that its people would become sufficiently prosperous and believe strongly enough in the value of education to support a major encyclopedia. Needless to say, this faith in America and its people was to reap a rich reward, and the 13 volumes, appearing periodically from 1829 to 1832, met with instant success.

Lieber's work was based upon and was in no small part a translation of the 7th edition of the well-established *Konversations-Lexikon* of Brockhaus, the first edition of which was begun in 1796 and completed in 1808. Lieber, an eminent scholar in the field of law and jurisprudence, had a distinguished career as an educator, political scientist, sociologist, civic leader, and author of many influential books. In 1835, he became professor at South Carolina College, where he served for twenty-two years before being called to a similar post at Columbia College in New York. *The Americana*, however, remained his most significant accomplishment. Its success is attested by the number of publishing houses in the United States and Canada which bought or rented the stereotype plates, marketing so many editions during the next 30 years that an estimated 100,000 copies were sold—an amazing figure for the time. In the 1850's a rising lawyer in Illinois with a deep love of learning, Abraham Lincoln, felt it necessary to add *The Americana* to his library.

The first new *Americana* of the 20th century, the 16-volume edition of 1903–04, is one of the significant peaks in encyclopedia history. Richard S. Peale, the new publisher, secured for this project the support of the distinguished periodical, the *Scientific American*, whose editor, Frederick Converse Beach, assumed the editorship of *The Americana* as well. Beach, who was a well-known scientist and inventor in his own right, obtained the cooperation of the most outstanding group of contributors ever represented in an American work.

*The Americana* was designed to give information in all fields of knowledge. It was and is strong in science, technology, American biography, geography and politics, but has never been limited to American subjects. The new edition also made use of the extensive research facilities of the *Scientific American,* establishing *The Americana's* pre-eminence in science. Every department of the encyclopedia was recast in the light of the most recent research, and the traditional excellence in American history and biography was continued. A new edition in twenty

volumes appeared in 1911 and a two volume supplement in 1912. The arrangement with the *Scientific American* was definitely terminated in 1911.

The next major revision of *The Americana* took place after World War I, with George Edward Rines as editor in chief. Under his direction the 1918–20 edition was expanded to 30 volumes, and entirely revised and reset. Rines managed to secure the assistance of a great new assemblage of scholars, too numerous to be named, and the result was the largest and best encyclopedia produced in America up to that time. A. H. McDannald, formerly of the Baltimore *Sun* and *News,* succeeded Rines as editor in chief. During his editorship *The Americana Annual* was established in 1923 as a yearly one-volume summary of events, as carefully edited and interestingly illustrated as the main work itself. McDannald saw clearly that, in the rapidly changing 20th century world, the best way to keep abreast of events and scholarship was to revise the encyclopedia continuously, bringing out a new edition with many significant changes each year, and inaugurating *The Americana's* present policy of continuous revision.

Since McDannald's retirement in 1947, the editorial direction has been in the hands of Dr. Lavinia P. Dudley, aided by a staff of expertly trained associates and an active advisory board of outstanding specialists. In keeping with the demands of the times, the program of revision has been greatly accelerated; and the encyclopedia, already worldwide in scope, has set a new standard of international coverage, while continuing its unique, comprehensive treatment of American and Canadian topics.

*Americana's* editorial policy is designed to keep this reference work authoritative, clearly written, up to date, objective, and comprehensive. The first requisite of any reference work is that it must be accurate and reliable.

Today a general encyclopedia cannot remain static. A five-year-old edition reprinted would find few purchasers. Constant revision is essential to keep a reference work in step with the thought and activities of an ever-changing world. For this very reason, *The Americana* has long been edited on a continuous revision basis, each annual edition containing thousands of pages of new and revised material. The encyclopedia is thus kept more abreast of the times than would be possible by using any of the other traditional methods, such as (1) publishing a supplementary volume every few years, or (2) scheduling a reset of the entire work every 10 or 15 years—which would require from three to five years in production. The practical advantage of a continuously revised reference work for a purchaser interested in the recentness of subject presentations, is that a much larger proportion of the text can be kept up to date than is possible under any other system.

Organization, standards, and procedures, after the plan of publication is approved by the publisher, are as follows:

All articles to appear in *The Americana* must conform to certain clear-cut standards. The Editorial Board, in consultation with Advisory Editors, selects as contributors world-famous scholars of recognized authority. A contributor must know his subject, and must also understand how it should be treated in a work of popular reference. The theme of an article is developed simply, clearly, concisely, and in logical sequence, with an appropriate balance in the space allotted to separate phases of the subject. Absolute factual accuracy is imperative, and the article must not be colored by the author's personal opinions. If there are diverging points of view on matters of importance, they must be presented objectively. If an article deals with one aspect of a subject treated elsewhere in the encyclopedia, cross references to the other articles must be inserted. Finally, to aid the reader in pursuing the subject further, a bibliography is appended to every major article.

Because *The Americana* readers come from every walk of life—farmers, housewives, students, scientists, to mention a few—special emphasis has been placed upon clarity of expression. By and large, each article is written with a degree of detail and at a level of maturity which meets the needs of the reader most apt to use it. And every article is planned to be not only instructive, but stimulating as well . . . leading ever onward to deeper understanding in the endless and exciting quest for knowledge.

After consultation with the appropriate member of the Advisory Board —which comprises internationally famed authorities in different fields— the editor in chief, or executive editor, writes the chosen author of a major article, inviting his contribution and outlining the scope of the proposed article.

Staff editors and researchers read and style each manuscript as received, raise questions, query statements that may appear to be of doubtful validity, and sometimes recommend the incorporation of new factual material. Before the article receives final approval for publication, problematical statements are verified, often requiring correspondence with authorities and advisers in many countries. However, no signed article incorporating editorial changes is published without the author's agreement to such amendments.

In addition to major contributions by outside writers, hundreds of short articles are prepared by staff writers who are specialists in certain fields of knowledge. Many experienced staff members speak several languages and consequently are not limited to English language sources in their researches. A splendid research library is available to all editors and writers.

There are 25 separate operations involved in "processing" an article from the time an author is invited to contribute until his article is published. After editing and styling, manuscripts are sent to the printer. In about four weeks galley proofs are received, together with the original manuscript. One set of proofs is mailed to the author for his corrections and approval. Another set is checked with the original article by proofreaders, to make certain that no lines or paragraphs have been omitted, and that the spelling, style, and punctuation are correct. A copyholder assists the proofreader in checking proof against the original manuscript. All corrections, deletions, and errors noted on the office proof and the author's proof are transferred to the printer's proof, which is returned to the printer.

Page proof is received about two weeks later. Editorial assistants check it and make further changes if necessary. If there are no changes on the first page proof, it is O.K.'d for plate proof. In the event that extensive corrections are required, the editor requests a second set of page proofs. Finally, plate proof is checked to ensure that all corrections have been made and no errors have been overlooked.

After consultation with authors, the art editor plans the type of illustrations to be used. Artists are then assigned to make drawings, photographs are selected, layouts are designed, and captions are written. The engraver makes the plates, which are sent to the printer. Proof is received, sent to the author for checking, and finally O.K.'d and returned to the printer.

The preparation of an Index to a multivolumed reference work is a tremendous task. With each successive revision of the set, the Index must be completely revised to agree with changes in the text, all old entries being deleted and new entries added. The annual revision of this one volume of the set requires the full-time services of three indexers, and a number of part-time assistants for a period of six months each year.

The task of producing an edition of *The Americana* is enormous. The editors must survey the whole world for their prospective articles and illustrations, and secure outstanding authorities as contributors and advisers.

The editorial policy of *The Americana* is guided by the needs of readers in a rapidly changing world. Suggestions for new articles, for the revision of old articles, and for changes in format, are welcomed by the editors and publishers. Cooperation on the part of users of the encyclopedia is most helpful in improving the quality and utility of the publication.

In August 1828 Francis Lieber wrote these words in the preface of the first *Americana*: "If the present work shall conduce to the diffusion of knowledge in this fortunate country, whose happiness is founded on its liberty, and whose liberty is to be preserved only by widely-spread information . . . I shall receive the most gratifying reward for the many laborious days which have been devoted to the present undertaking." Lieber's brave hopes were more than fulfilled by the success of his great pioneer undertaking; and his noble aim remains the inspiration of the editors of *The Encyclopedia Americana* today. ♦

# *EDUCATION THROUGHOUT THE AGES*

*from the Wisdom of Encyclopedia Americana*

IN ITS broadest meaning, education is any process by which an individual gains knowledge or insight, or develops attitudes or skills. It is called formal education when it is acquired through organized study or instruction, as in a school or college. It is informal when its content arises from day-to-day experiences or through relatively unplanned or undirected contacts with communications media, such as books, periodicals, and motion pictures.

The function of education is both social and individual. Its social function is to help each individual become a more effective member of society by passing along to him the collective experience of the past and present. Its individual function is to enable him to lead a more satisfying and productive life by preparing him to handle new experiences successfully.

Education is also the name given to that science or branch of study that deals historically and contemporaneously with the principles and practices of teaching and learning.

The history of education has gained considerable attention in the past century. Certain significant changes have occurred in its treatment. At first considered merely a part of professional pedagogical study, it has come to be reckoned as an important phase of the study of the history of cultures. Formerly limited to intellectual affairs, it now considers social phenomena, health, and physical exercise. Its literature once consisted of little more than outlines of educational theory and brief biographical sketches. It now portrays education in relation to the whole social setting and includes histories of particular educational movements and individual institutions, full-length biographies of educators, surveys of the development of education in recent and remote times in individual countries, and exhaustive studies of special educational problems.

The education of man, in the fullest sense, is the entire process by which individuals and groups modify or redirect the tendencies native in him. Thus a truly complete history of human education is a practical impossibility. It should properly constitute the entire account of these individual and social efforts and their consequences, from the first emergence of man to the present day.

In general, in considering educational history, it is well to distinguish between two overlapping processes, the education of the mind and the education of the body. Within these two definitions, another distinction may be drawn between *informal* education, or the learning process which operates constantly, arising simply from living in a certain environment, and the *formal* processes (methods, subject matter, institutions, teachers), which are intermittent in their operation. Religious or secular individuals or groups have used the formal processes to affect mental, moral, and aesthetic behavior. The native potentials of the body, developed by exercise in play and work, have similarly been expanded and perfected by various disciplines to produce agricultural and industrial achievements, of both war and peace, and to develop aptitudes in a vast array of sportive recreations.

Surveying this many-sided history from earliest times to the present, it is useful to distinguish also between the three major levels of educational activity: preliterate; literate; and philosophical. This does not mean that later levels supersede the earlier; on the contrary, with the highest achievement in educational philosophy may be mingled the merely literate, or indeed the primitive or preliterate.

The education of nonliterate peoples was, and, where they survive, still is concerned chiefly with (1) passing on by informal apprenticeship tribal lore and traditional skills pertaining to food-getting and protection against man and nature, often involving a considerable development of handicrafts in contriving the utensils of the camp, implements of hunting, fishing, and warfare; and (2) more formal exercises such as initiation rites marking passage from youth to adulthood, totemistic and medical ceremonies, fertility cults, and kindred performances designed to explain and control the visible world of nature by reference to an invisible spirit or vital power, with which primitives invest all things. These beliefs and practices made up the religion of primitive man and vestiges of

*The 13th century brought a rediscovery of man's individual importance and began the dynamic quest for freedom through learning.*

*Better be unborn than untaught, for ignorance is the root of misfortune.*—PLATO

*Learning is wealth to the poor, an honor to the rich, an aid to the young, and a support and comfort to the aged.*—LAVATER

them persist in the life of otherwise highly educated peoples. It is noteworthy that in preliterate as in more advanced cultures, play is often both spontaneous and controlled, the two aspects of it being closely allied to, and often evident imitations of, adult activities. Play and "learning by doing" thus belong to the earliest as well as the most modern educational practice; but the latter rests upon theoretical grounds.

The economy of the primitives being limited by what nature afforded, tribal life was nomadic and education was in harmony with that fundamental fact. Where nature's gifts were sufficiently generous in respect to rainfall, floodwaters, sunshine, and ready highways for communication, man settled down and little by little developed agriculture and fostered the first cities known to history. The agricultural economies, which were already taking shape three to four thousand years before the Christian era in the great river valleys of Babylon, China, Egypt, and India, favored numerous social and educational developments: the growth of private property, chiefly land and its products; larger concentrations of population; social stratification into functional and, in various degrees, hereditary classes (priests, nobles, farmers, artisans); law, designed to explain and regulate human relations and property rights; and education, increasingly formalized and specialized according to the duties of the emergent social classes.

In general, esoteric lore and practice, law, and letters, when these had developed, became the domain of priests or other learned classes; warfare became the function of noble warrior classes; and unremitting labor, agricultural and industrial, was the lot of the masses of the people. Wealth, in one form or another, was the portion of the first two classes, and poverty was that of the major fraction. This socio-economic situation, which has persisted in many parts of the world, is the background against which the revolutions in the Orient and elsewhere are occurring.

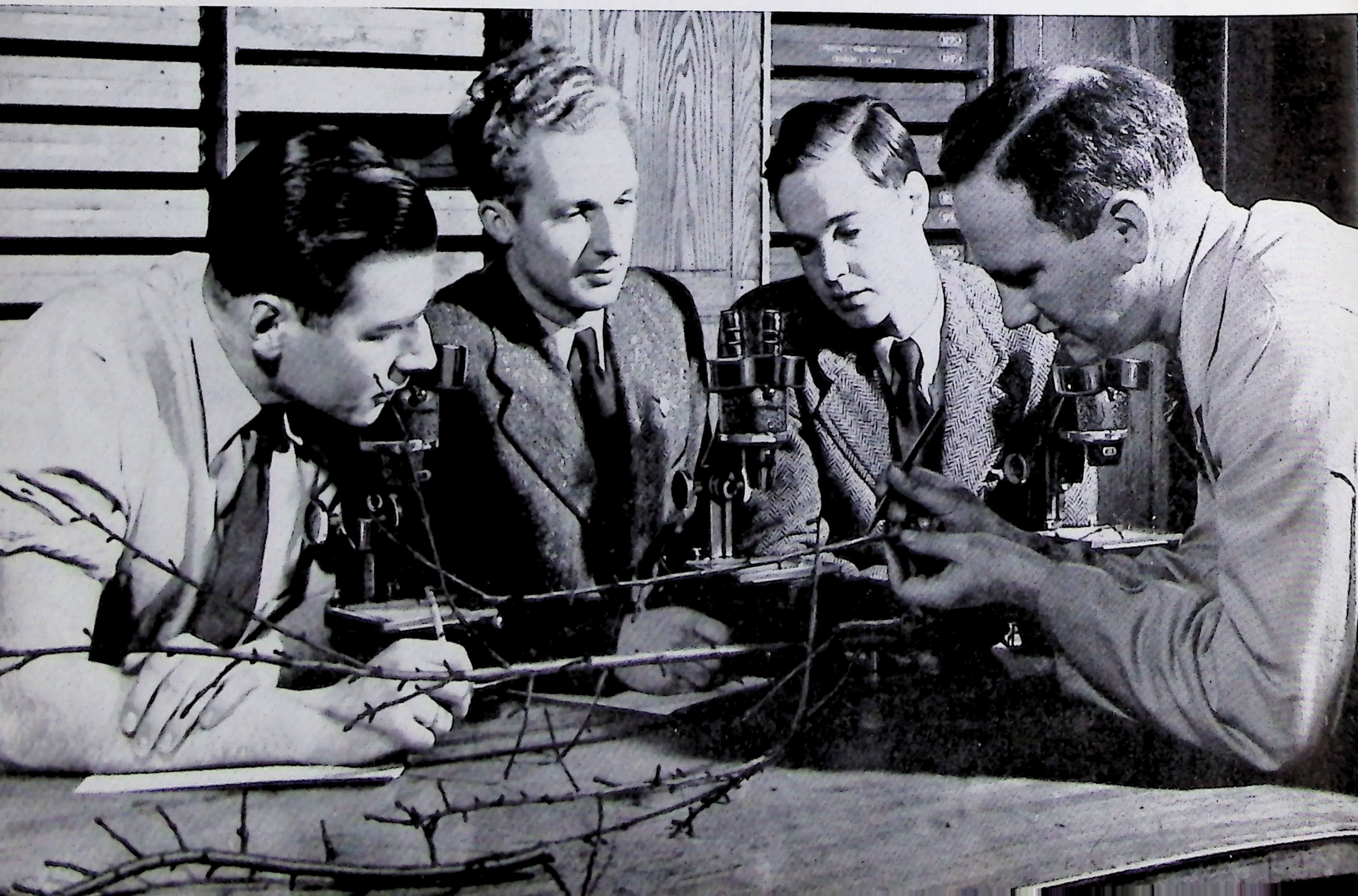
These new, settled economies, in contrast with tribal and nomadic life, offered conditions propitious for the expansion of man's mental realm. Surplus wealth not only created new problems, but gave to a minority class increasing opportunity for the study of them. For example, agricultural lands and their products entailed development of reckoning and measurement. Also, whereas primitive, nomadic man might draw pictures and tell of some events on cavern walls, his larger lore of choicest memories remained an oral tradition; but settled man developed elaborate arts of writing, flexible enough to tell whole histories, show abstract ideas and relations, and, at long last, cast his great traditions into literary form.

Aristotle traced the origin of the liberal arts to Egyptian priests, whose leisure afforded the opportunity for their development. The early traditions of most literate peoples explained the invention of letters as the gift of some great legendary god, god-king, or national hero—Thoth, Huang-ti, Cadmus. A significant mental change was now in prospect. No longer limited to direct experience and what memory could recall, man's mind, artificially aided by the record, was enriched and enlarged by untold generations of memories. For a small part of these early societies, vicarious learning took precedence over direct experience. Thenceforward, in greater or less degree, certain of the ancients became the "peoples of books." The vast extent of this province of letters is suggested by the fact that the larger cities of Babylon all had libraries, the one at Tello (c. 2700 B.C.) containing 32,000 books. Grammar, public and private letters, philology, law, history, chronologies, geography, astrology, medicine, natural history, mathematics, divination, and theology were represented in these holdings.

Everywhere in antiquity, whether in Egypt, India, Babylon, China, Athens, or Rome, this most important aspect of the new education—letters—which man acquired with settled life and with agricultural, industrial, and commercial development, remained in a full sense the privilege of a favored few, the priesthoods, the *literati,* or the "free citizens." A slave could, of course, be instructed, that he might be a better slave; Epictetus even became a philosopher. Letters for the masses did not become a reality until after the invention of printing in the late 15th century and the rise of modern national systems.

With the advent of letters, formal education at the hands of teachers, scriveners, priests, or laity, was vastly increased. Reading, writing, elementary arithmetic, and accounting were a means to a better existence.

*Learning, if rightly applied, makes a young man thinking, attentive, industrious, confident, and wary; and an old man cheerful and useful. It is an ornament in prosperity, a refuge in adversity, an entertainment at all times; it cheers in solitude, and gives moderation and wisdom in all circumstances.* —PALMER



Quotations from Egyptian writings ("Give thy heart to learning;" "an ignorant man, like a heavy-laden ass, is driven by the scribe.") suggest the importance which educated Egyptians attached to letters. Diligence was the scholar's rule. One who wishes to get ahead in school, a Babylonian copybook tells us, "must rise like the dawn." A Chinese scholar saw the bee as a model of industry and wrote: "If men neglect to learn, they are inferior to insects." Schools, in countries where religious authorities were supreme, were commonly associated with temples. They were also instituted in palaces and conducted by private masters.

In Greece, in contrast to Egypt, Babylon, and India, education was under secular control, and for the benefit of the city-state. Sparta, established in the Peloponnesus by Dorian conquest, developed a phenomenal education for both girls and boys of the *Spartiates,* the free citizen class. This training was chiefly in physical sports and military exercises, designed to maintain mastery over vanquished peoples.

Athenian education, though it served the city-state no less than did that of Sparta, was more varied and flexible. Intellectual, aesthetic, moral, and political, as well as physical education flourished in the music school, the palaestra, and the gymnasium. Military training served as the final preparation for the duties of citizenship. Schools were private but were subject to regulations imposed by law. Girls generally had no education outside of the home. Craftsmen were trained by an informal apprenticeship to their labor, later formalized and fixed by contract.

Under the pressure of economic, social, and political forces, major changes in the original pattern were evident by the 5th century B.C., marked, on the one hand, by a decline of general physical and military training and the growth of professionalism, and on the other hand, by a correspondingly greater stress on intellectual training, fostered by sophists and philosophers. From this cultural movement grew the University of Athens, which survived and even retained its prestige until 529 A.D., when it was closed by Justinian's decree. Athens, at her intellectual best in the era of change, raised education from mere routine practice. The leading philosophers, Socrates, Plato, and Aristotle, critically examined and clarified the major problems of education and thus laid the foundations of educational theory. The influence of their ideas lingers to this day.

At Rome, education, in its earliest form, was practical and religious, centering in farm, forum, and military affairs. Service to the state was held in highest regard, but education was private, first in the home and then in schools. Livy (Titus Livius) speaks of a *ludus,* an elementary school, but letters had small place in Rome's early education. Roman expansion into Africa and the Middle East altered this. After the mid-3d century B.C., the process of Hellenization got underway, and schools of grammar and rhetoric, Greek and Latin, soon flourished, vastly enriching the previous training which had centered on the Twelve Tables of Roman Law. In physical culture, the Greek gymnasium had come into popularity by Cicero's time, but Greek gymnastics were never accepted as substitutes for Roman military training. Medical science and architecture made notable progress.

For many years Hellenic letters reigned supreme, but, in time, Roman authors such as Cicero, Virgil, and Horace achieved due respect. From Cicero to Quintilian Roman literary education was at its zenith. Their works on oratory formed the canon of the new training. In Cicero's day, eloquence addressed itself to real questions. Under imperial rule, however, the voice of free men was gradually stilled. Oratory aimed at entertainment. Excessive preoccupation with words and little attention to content became the rule. Literary and philosophy schooling of this narrowed sort was fostered, supported, and controlled increasingly by emperors from the end of the 1st century onward.

By the 13th century, a "new life" was emerging in western Europe. This renaissance, often interpreted narrowly as a classical and aesthetic change, was marked by: (1) a thriving guild industry and trade which expanded small settlements into cities; (2) a subjective change involving a rediscovery of man's individual importance and as assertion of pride in personal achievement; (3) a new interest in the objective world, which was to effect a turn from the static "science" of the Middle Ages to exploration and a dynamic quest for the mastery of all nature; (4) a hardy rationalism, which first restored Aristotelian dialectic, once banned by the early church fathers, and then spread to other human affairs; (5) a new aestheticism, conspicious in literary and graphic arts; (6) a political phase, with a dawning consciousness of nationality, expressed in vernacular literature, a demand for popular education in the vulgar tongue, and an emergent struggle between ecclesiastical and secular powers; (7) a reversion to classical sources which gradually revealed to Westerners a pagan life of richness and beauty which they had never known and which illuminated their own quest for human fulfillment; and (8) a "new" pedagogy, whose principles, like the content of the new studies, came from ancient authors, Latin and Greek. This "new life," at heart, a vital quest for human freedom, has, in its broadest sense, continued to the present time.

The "new" education of the early humanists likewise reveals in its chief principles certain germinal ideas of modern pedagogy. These are: develop the whole man, individually and socially; educate women as well as men; adjust education to individual capacity, following "nature's lead"; cultivate independent thought; educate the body as well as the mind; make education pleasant; foster natural interests; recognize play as a valuable index of human ability, a part of education, and an aid to pedagogy; avoid harsh discipline.

Institutions and curricula have been progressively altered and adjusted to socio-political demands. Early humanistic education, limited at first by social and economic privilege, gradually became, under the influence of change, accessible to a greater and greater number. The studies, which are only a means, shifted from an almost exclusive attention to Latin and Greek classics to a mixture of classical, vernacular, social, and scientific studies, but the ends remain essentially the same.

Institutionally, many innovations were required by the unfolding "new life." At first, classical studies found a place, on an intermediate level, in Italian court schools, German *Gymnasien,* French *collèges,* the English great public school, and the American Latin grammar school. *Realschulen,* academies and, later, high schools made homes for vernacular, scientific, and social studies. With increasing frequency, classical and modern studies mingled in the same school. The German *Realgymnasium* combined science and classics. Girls, generally excluded at first, save for a few of the upper class, progressively shared education in academies during the second half of the 18th century; in the 19th, the United States public high schools and the principle of coeducation realized full educational equality of the sexes.

Universities, originally the homes of theology, law, and medicine, were at the outset hostile to the "poetry and eloquence" of classical humanism; subsequently, they opposed science and technology as too worldly, vulgar, and utilitarian; by the late 19th century they embraced all studies, adding engineering and even a "science" of education, and prepared both men and women for new vocations, as well as for the older professions.

Among the tendencies in education which stand out most sharply in the 20th century is the increase in educational opportunities for women. The early history of education was largely a record of opportunity for boys. The exceptions in ancient China, Egypt, Babylon, India, and the Mediterranean cultures were few. Plato argued the equality of talent in male and female, but his influence on educational practice was slight. Christianity introduced the concept of moral equality of men and women; but the choice between normal life and life in a nunnery, where the only educational opportunities existed, was a hard one. The "new life" brought classical letters to a favored few of noble status. Elementary and secondary education for girls expanded somewhat with the spread of Protestantism and the growth of a prosperous middle class in Western Europe and America in the 17th and 18th centuries. The 19th century saw the beginning of collegiate education for a very few. Professional education in law and medicine was gained by a handful of able, ambitious, and persistent women after the mid-century. Postgraduate education in the arts and sciences, beginning slightly in the last quarter of the 19th century, increased rapidly during the 20th.

The development of professional education is the most significant index of this revolution. Earlier education in letters and "accomplishments" signified but little. To what use could it be put? Throughout the ages, man's education had led to public activities. With professional education of rapidly augmenting magnitude, paths of preference opened to women as they had to men. ♦

# APPRECIATING ART AND ARTISTS

*from the Wisdom of Encyclopedia Americana*

*All great art is the expression of man's delight in God's work, not his own.*—RUSKIN

Art appreciation is a popular name given to an activity of the mind which judges a work of art. A less popular name for the same activity is *art criticism.* The only conclusion ever reached by means of art criticism is one of the following statements: "this is a work of art"; or "this is not a work of art."

Such statements go far beyond individual preferences. The statement "I like it," or "I don't like it," is not a basis for discussion. Individual preference is always arbitrary. Therefore it is never right, but, also, never wrong.

In forming a judgment on art, individual preference cannot be entirely avoided, but must be transcended. One may prefer *Così fan tutte* by Mozart to the *Eroica* by Beethoven, or a pretty girl by Renoir to a rough peasant by Cézanne. But one must admit that what is artistic in Beethoven or Cézanne is different from what is found in Mozart or Renoir, and despite the difference one must appreciate it if one wishes to enter the field of art criticism. That is, there is a quality pertaining to a work of art which is not dependent on one's likes or dislikes. This quality is objective; it is art itself. A critical statement is based on the understanding of each objective quality; and because the basis is objective, the statement is not arbitrary. Thus it can be discussed; it is right or wrong.

Not all statements can be proved by reasoning, but every statement must be supported by some principle; if it cannot be so supported, it is false. The principle guiding any statement or art criticism is the idea of what art is. The task of art criticism is to find a relation between the universal idea of art and the individual work of art.

There are many ideas as to what art is. There are many ideas, too, as to what philosophy is, what science is, what morals are, and so on. The problem is to choose the best among the ideas. Let us suppose that the best idea of what art is, is that art is a form given by man's imagination to his sensory experience and his life of feeling. To find a relation between the idea and a work of art, the critic must analyse the work of art and understand the senses of the artist who did the work, his feelings, and the process of his imagination. That is, the critic must engage in what amounts to research into the psychology of the artist, research which goes beyond psychology only at the moment of the conclusion—this is or this is not a work of art.

In other words, the critic must interpret the work of art in the light of all available historical materials, in order to reconstruct in his mind the whole process of the artist in creating it. When the reconstruction is completed, the critic should be in a position to understand whether the process has been that of a truly creative imagination, or whether it has been disrupted by extraneous forces. An excess of sensuousness, for example, or an indulgence in sentimentality, hampers the freedom of the creative imagination, and stops the process short of artistic form. An overstrict adherence to an abstract theory will destroy the contact between the imagination and the life of senses and feeling, and thus make the form cold, rational, lifeless. Or the process may be that of a mind preoccupied with supporting a religious dogma, or a system of morals, or a political party, or an economic enterprise; here too the artistic achievement will fade away, and it will be supplanted by rhetoric. Only if all the elements of the life and mind of the artist are concentrated in his free creative activity, only then will the critic be able to proclaim: "This is a work of art."

In order to analyze the work of art and to collect historical materials which help explain it, the first requisite is culture. It is not true that anyone at all is capable of judging a work of art simply by listening to the inner voice of his soul. What is true is that without artistic sensibility no artistic judgment is possible. Artistic sensibility, however, is not a simple thing like an electron, but a composite of many human activities. It is common knowledge that those people who enjoy reading poetry, looking at pictures, listening to music, and who have read, looked, and listened constantly and continually, are better able to judge a work of art, than people who lack that knowledge. And those who have had the patience to compare their own judgment with those of other people, trying to understand why they agree or disagree—these patient students have taken a further step in enriching their sensibilities. Moreover, since life and nature are always represented in a work of art, those people who have a broad experience of life and nature are much better equipped to understand what art is. Sensibility and culture complement each other; sensibility being the common ground from which ideas flower, and at the same time being enriched by ideas. Without ideas, sensibility cannot be developed and refined, but no artistic judgment is possible with ideas alone. The interaction of both sensibility and ideas is essential to artistic culture. When sensibility predominates, the understanding remains vague and incoherent, because it is subject to the impulses of the moment. Then the contingent prevails over the eternal. When ideas prevail and sensibility is subordinated to rules that are too rigid, what is lost is the sight of reality itself. A balance between sensibility and ideas is necessary.

For art criticism there is needed not only a wide culture, but one which can be focused on the individual work of art or the individual artist, without prejudice. For a cultured man this effort of grasping the individual work of art presents the greatest difficulty. All past experiences must be at once employed and forgotten. Otherwise the critic does not grasp the single reality he must judge. In other words, culture must be a means, but must never set itself up as a law.

Every well-known artist has many imitators. They cannot, of course, reproduce the master's creativeness, but they are often able to reproduce certain elements of his art called "manners," that is, the most artificial elements. Also, they accept their master's "lesson," his theory, his intellectual preferences which are justified only by his art and are often worthless outside that art.

When a real artist adopts an already existing rule, he transforms it, and creates it anew. But this rule will be good only for the artist who has recreated it and bad for all other artists. Walt Whitman's free verse was necessary to his inspiration, his conception of poetry as an ethical message; it was, therefore, well fused with his art. But many writers of poetry at the end of the 19th century used free verse only because they considered it fashionable; this gave rise to a new art, but to a new affectation, unrelated to art. Michelangelo's habit of painting and carving gigantic nude figures of men and women, called *terribilità* because it served to excite terror, was a perfectly adequate expression of his sublime passion. But his followers, who often copied his gigantic, "terrible" figures merely to show their technical ability, and failed utterly to fill them with passion, became ridiculous. Free verse and *terribilità,* which are merely aspects of Walt Whitman's and Michelangelo's art, were thus considered rules by their followers, and as rules they were obeyed. Critics sometimes accept such rules as standards of judgment, and praise a poem because it is written in free verse or a sculpture because of its giant forms.

This is a serious mistake; but it is one which can easily be avoided by experience. It is not easy, however, for a critic to be impervious to the influence of any rule whatever. Many rules exist, some of them two thousand years old. They are taught in all schools; we learn them from our childhood, and, creatures of habit that we are, we do not discard them easily.

Socrates said that the acme of wisdom is to know that we know nothing. A great deal of wisdom is indeed necessary to approach art with an open mind. Wisdom is always accompanied by a certain sense of humility. The tendency of so many critics to tell a poet what he must write and how he must write it, to tell a painter what he must paint and how he must paint it, in order that they (the critics) should be satisfied, is the best way to understand nothing whatever of the artist's work. Instead of teaching an artist, the critic must try to learn from him. First of all, he must try to learn the artist's language.

A critic must also look beyond what he sees, listen for sounds beyond those he hears, in order to penetrate with his mind into the artist's soul. ♦

*Raphael's self-portrait (1506)*

# RAPHAEL

## *master painter of the Renaissance*

*"The Glorification of the Holy Sacrament" fresco in the Vatican. (1509-10)*

*from the Wisdom of Encyclopedia Americana*

THE mountain town of Urbino was the capital of the ancient duchy of the same name, which came to an end in 1626. The castle or palace of the duke is still a building of extreme interest; and there is evidence that during the lifetime of Frederigo and Guidobaldo—who reigned during the years of Raphael's youth—the palace was one of the most remarkable museums in Italy, being crowded with works of art both of antique and of Renaissance production.

Raphael Santi was born on March 28, 1483 in Urbino, Umbria. The young Raphael was allowed to devote himself to art the more readily that his father, Giovanni, was himself a painter. It seems that the family had lost property; and there is much in the record concerning Raphael to indicate the existence in his character of traditions of elegant life and that kind of sympathy which comes from ancestral cultivation. At a very early age for a student of art he entered the workshop of Perugino; his possibly earlier studies with Timoteo Viti being of little consequence to his artistic growth. It is asserted that the young man went to Siena, where Pinturicchio was at work; but this is doubtful, and it is only important because there has been so much question about the true influence which at first determined or modified Raphael's career. It was as early as 1504 that he first went to Florence, and the artists who would then have influenced him the most were Leonardo da Vinci and Michelangelo; because while the earlier Florentines would be more immediately recognized by him as painters of the ancient and traditional manner, it is clear from his subsequent history that he was more quick than any other man would have been to adapt himself to the larger conditions of a new world of art. The first absolutely modern painting may be said to have come into existence with Leonardo da Vinci, although that great master allowed himself but little time to devote to executive work, and has left us almost nothing by which we can judge his full strength. As for Michelangelo (eight years Raphael's senior, and as precocious), his work must have revealed to Raphael the possibilities of magnificent design in which the human body is treated as the principal subject, without important assistance in the way of draperies, backgrounds or even narrative subject, as a work of art.

The earliest painting which can be ascribed to Raphael with some certainty is the *Marriage or Betrothal of the Virgin* (called *Lo Sposalizio*) at the Brera Gallery in Milan. This picture shows the Umbrian feeling, and has many resemblances to the full manner of Perugino, Raphael's master; but it is significant that no serious attempt has been made to dispute the ascription of it to Raphael himself, so great is the resemblance in the peculiar grace of its composition to the more mature works of the younger man. The most important record we have of his earliest stay in Florence, ending with his 25th year, is the *Madonna with Saints* in the National Gallery, commonly known as the *Ansidei Madonna*, which, however, is thought to have been painted during a visit which he made to Perugia; and other Madonnas, such as that in the Pitti Palace, called the *Madonna del Gran' Duca*, and the *Madonna with the Goldfinch* in the Uffizi; as well as a picture in the Louvre Museum at Paris, called *La Belle Jardiniére*. This epoch, however, was one of constant production, and there are many small paintings, only less important than those named above, which may with considerable certainty be given to this period, namely, the years of his life from 20 to 25. It was in 1508 that he went to Rome.

It does not appear that Raphael was sent for directly by the order of Pope Julius II, but he began work there almost immediately on his arrival, and indeed the first of the famous halls in the Vatican which are covered with his paintings was completed, nearly as we see it now, as early as 1511. This room, known as the Camera della Segnatura, or Chamber of the Signature, is a hall roofed with a solid masonry vault, having one large window turned nearly to the north and lighting the room fairly well on bright days. On the west wall is the famous painting known as the *Disputa del Sacramento,* which should properly be called in English *The Glory or the Triumph of Religion*; and opposite this to the east is the *School of Athens.* Over the window is the Parnassus presided over by Apollo; and opposite the window is, in the lunette, the magnificent *Jurisprudence*; while below this and on either side of the

*"The Prophet Isaiah" fresco in Rome. (1512-15)*

*Fain would I Raphael's god-like art rehearse, where, from the mingled strength of shade and light, a new creation rises to my sight; such heavenly figures from his pencil flow, so warm with life his blended colors grow.* — ADDISON

*"Heliodorus Struck by the Terrible Rider."*

deep niche serving as the recess of a window now condemned, are paintings having to do with the Papal authority in earthly and spiritual things. Similar paintings adorn the dado beneath the great pictures, and the vault itself is covered with work by Raphael's own hand; in fact, lovers of Raphael's painting, considered by itself and without reference to its historical importance, have always found the Camera della Segnatura the most delightful place for the study of the master's individuality. There is every reason to suppose that the greater part of the work here is due to his own touch; the employment of assistants being much less probable here than in later works.

When this first series of important wall paintings was completed Raphael was 28 years old and he had only nine years to live. During those nine years were produced the paintings in the four large rooms in the Vatican adjoining the Camera della Segnatura, and also the decorative frescoes in the Farnesina Palace, the outdoor corridors and vaulted galleries fronting the Cortile di S. Damaso in the Vatican, which are known as the Loggie di Raffaelle, and also a great number of easel pictures in oil portraits, religious pictures sent as presents to the king of France and other foreign princes, and, toward the close of his life, two pictures of peculiar importance in his history, because they have always excited so much general admiration. These are the *Madonna di San Sisto*, now in the royal collection at Dresden, and *The Transfiguration*, left unfinished at his death in Rome on April 6, 1520, and now in the picture gallery of the Vatican. Raphael also made some designs, or at least undertook some superintendence as architect, especially in connection with the church of Saint Peter, and as designer of several palazzi, or stately mansions, in and near Rome. The excavations going on among the ruins of Rome also excited his interest and took up much of his time. He was surrounded by assistant artists who worked with him or for him, under his general direction and also from his studies and under his immediate control. It is now impossible to discriminate between these different ways of work, except by means of the internal evidence of more or less characteristic handling in the painting. Thus it is generally agreed that the large frescoes of the battle at the Milvian bridge and the other paintings in the Stanza di Constantino are almost wholly by the hand of his assistants; while those in the Stanza dell' Incendio and in the Stanza dell' Eliodoro are, though not wholly by the hand of Raphael, his work as to their general designs, as to their composition both in mass and in color and largely his own creation. The remarkable fact concerning these and the smaller paintings is that they all, except some of those in the Constantine series, belong to that well-known family or class of works which have become familiar to all the European world, as typical pictures by the artist who is generally accepted as the first of religious painters, while at the same time his name is used by artistic reformers as a symbol of the commencement of the decline of art.

His work shows little interest in realization of incident or of action; he is regardless of the impossibilities of the Apostles in long and voluminous robes, and of men in a fishing boat much too small for them—indifferent to the contradictions of the famous picture of *The Conflagration in the Suburb*, where flames are seen flickering among marble columns and walls of cut stone without anything to feed them; and yet this lack of realism in his designs has never diminished his vast popularity as the typical painter toward whose work everyone turns when there is mention of Christian religious painting. There is no better instance of the purely artistic quality obtaining full recognition in spite of the absence of those qualities which are generally considered more popular; the main reason for this is in the extraordinarily perfect composition in line and in mass, the figures filling the chosen oblong or the lunette or the circle in so many of his compositions, with absolutely faultless harmony, producing the desired result—a picture of entirely harmonious effect. As a colorist he is not one of those painters to whom glow and splendor of hue is the important thing, who deem design in color supreme, as do Correggio and the great Venetians from the time of Vivarini to that of Tiepolo; but invested his noble linear compositions with a coloring wholly agreeable, never violent, always satisfactory to the student of sentiment in art, and to the lover of noble composition—those students being more numerous in the world than the lovers of color for its own sake. ♦

*"Study For The Esterhazy Madonna," pen and ink drawing. (about 1508)*

*"St. George and The Dragon," pen and ink cartoon. (about 1502)*

*"Men On Foot and Mounted," pen and ink drawing. (about 1504)*

# WOMAN IN A MAN'S WORLD

*from the Wisdom of Encyclopedia Americana*

*In all societies women have played a much more important role than the menfolk are generally ready to admit.*—MONTAGU

*Women govern us; let us try to render them more perfect. The more they are enlightened, so much the more we shall be. On the cultivation of the minds of women, depends the wisdom of man.*—SHERIDAN

THE term feminism was first used by the French dramatist, Alexandre Dumas the younger, in 1872 in a pamphlet, *L'Homme-femme,* to designate the then emerging movement for women's rights. Before Dumas coined the name, the movement had existed for centuries in the bosom of the family, or wherever two or three women were gathered together. Shortly after John Stuart Mill wrote his famous *Subjection of Women* in 1869, the woman's movement forsook its cloistered retreats and took to the market place. Feminism had become articulate enough to lift up its voice in public.

Feminism is a world-wide cultural movement to secure the complete equality of women with men in the enjoyment of all human rights—moral, religious, social, political, educational, legal, and economic. The woman question—to give feminism its second name—is as old as Adam and Eve. "When Adam delved and Eve span," runs the proverb, "who was then the gentleman?" The proverb relates to equality as well as to social rank and status. In other words, feminism dates from the very beginnings of human culture. The problem was already an old one when the Greeks glorified the Amazons in song and story. And it is still an unsolved problem; witness the fairly recent British proposals—not yet a matter of practical politics—that all members of city, state, or national legislating bodies shall be elected by what is called the "double vote" or the "coupled vote," so that every legislature in the country shall consist of exactly as many female members as there are male members.

At bottom, the feminist demand for complete equality is a moral problem even more than a social one, for feminists appeal to the conscience, no less than to the common sense, of mankind. The common sense of the matter is epitomized in the ancient saying that "what is sauce for the goose is sauce for the gander, and what is sauce for the gander is sauce for the goose." On the ethical side, feminism derives religious strength from what is probably the earliest written statement of the equality of the sexes. Genesis 1:27 reads: "So God created man in his own image, in the image of God created he him; male and female created he them." Surely this means that woman is not a *different* species from man, as Mohammed and St. Paul appear sometimes to believe. She is the female of the same species of which man is the male. If "the divinity that shapes our ends" refers to woman no less than to man, then who is man that he should presume to discriminate against woman, who was made in the image of God precisely as man was made? Feminists say that as Genesis 1:27 acknowledges woman's moral equality with man in the sight of God, none of the other equalities she claims can rightfully be denied her.

It is easy to see how the social tradition of woman's inferiority got the better of the moral tradition of her equality. When our super-ape ancestor was striving to become human, he faced a world of physical dangers and terrors in which brute strength seemed to be his chief asset in the struggle for survival. No doubt his invisible brains were more significant than his very visible brawn. But what everybody could feel and measure was girth and muscle. Therefore primitive tribes-people were ranked higher or lower according to their brute strength quotient. In this respect the males, exempt as they were from the burden of child-bearing, had an enormous advantage over the females. The whole female sex was therefore set down as lower than the whole male sex. And the men rubbed it in by compelling the women to do the most distaseful drudgery and accept the stamp of a distinctly lower social status.

Perhaps this result was unavoidable in the Stone Age when a merely brainy person seemed helpless against a brawny one. But after the females had been coerced into doing the dirtier jobs and accepting the lowest social status, what could have been meaner than for the males calmly to declare that the fact that woman never held high public jobs and always occupied a base social station was a clinching proof that she had forever branded herself as man's inferior?

Naturally there were always some women and probably a few men who condemned the subjection as a wicked, unhealthy thing, bad for the development, not only of woman, but of man and indeed of the whole human race. These dissenters, both men and women, were the world's first feminists, though the name was yet to be invented. They had to hold their tongues in public until civilization had progressed to higher levels. Meanwhile, they silently carried on the moral tradition of woman's equality against the dominant social strain of woman's inferiority.

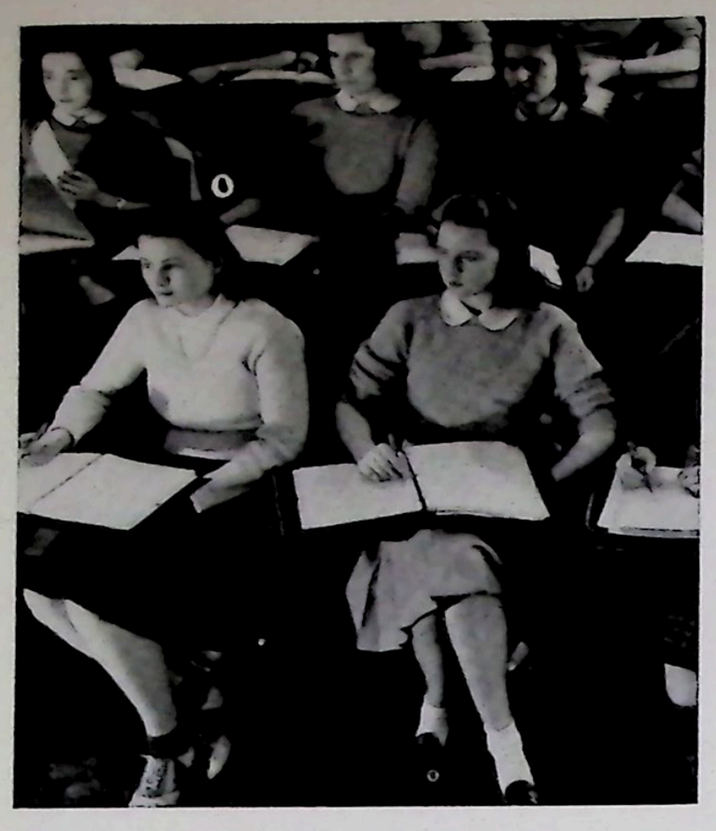
Male domination and female subordination were not effected in a day. The researches of Margaret Mead, Roert Lowie, the Vaertings, and other investigators of primitive cultures, show that, in the very earliest human groupings and settlements, women played a much more important part than they did in later primitive periods. These vestiges of woman's originally higher status can best be considered under the headings of Mother Right, Matrilineal Descent, and Matriarchy.

Mother Right means the unquestioned right of the primitive mother to the guardianship of her own children. This right was an entirely natural outgrowth of the spontaneous intimacy between mother and child, and the uncertainty of paternity in the earliest times. Everybody in a primitive tribe knew who his mother was. But as nobody knew for certain who his father was, the identity of the father was not a matter of the least social importance. The tribe looked to the mother for the nurture and control of her children, and no one dreamed of contesting this fundamental Mother Right, which was as universal in primitive beginnings as Father Right became later on.

Naturally enough, descent came to be reckoned through the unquestioned mother rather than through a putative father. This form of tracing descent through the maternal line is known as the matrilineal form. It did not give way to the patrilineal form until the nomads became part-time farmers and brutish masters of their caves and their women. At this point, the males arrogated to themselves all the rights they could forcibly claim. They laid claim to the huts or caves they lived in, to the women they could club into submission, and to the children of those women. And when they stopped the females from having sex experiences outside the "home," paternity became a sufficiently identifiable thing to permit the males to claim the ownership of the children and to reckon descent through the male line. Thus women were brutally deprived of their fundamental Mother Right and a Father Right was established in its place. "The great historical defeat of the feminine sex" is the way August Bebel, the former German Socialist leader, describes this momentous transfer of social power from the women to the men.

But perhaps women accepted the defeat for the sake of the greater security it gave their children.

Matriarchy denotes government by the mothers, or by the older and more respected women of a social organization. Whereas the term *matriarchy* denotes rulership, the term *matrilinealism* denotes the tracing of descent through the female line. Matriarchy went hand in hand with Mother Right, and doubtless helped women to influence the shape that custom and law should take. Some anthropologists say that the Iroquois Indians were and certain Australian and South Pacific Islanders are ruled by women, and the Vaertings, in *The Dominant Sex,* assert that the matriarchal system prevailed at times in ancient Egypt, Libya and Sparta. As the evidence in all these cases is not conclusive, many scholars maintain that the so-called matriarchates are always controlled by men who use economic or social power behind the official forms. C. Lévi-Strauss, in his profound study of primitive societies, declares that "political power has always been in male hands... public or simply social authority always belongs to men."



*Men have sight; women insight.* — VICTOR HUGO

*A woman has this quality in common with the angels, that those who suffer belong to her.* — BALZAC

Still, even when woman's position was at its lowest, there was mild consolation for her in her plight. The moral tradition of her equality, which never quite died out, kept asserting itself in strange ways, for instance, in a belief in powerful female deities.

When the nomads settled down to farming, man grew increasingly conscious of two natural phenomena that astounded and puzzled him beyond measure: One was the fertility of the soil or of nature; the other was the fertility of woman. Without a fertile soil, the tribe starved to death; without fertile females the tribe became extinct. Soon the two fertilities were mystically linked in the tribesman's mind. Indeed, woman's fertility became a symbol of nature, so that nature was personified, not as a man, but as a woman. Since bumper harvests were a source of more abundant life, and lean harvests were a tragedy, men deified Nature as a goddess of fertility and strove to please or propitiate her with sacrifices. Nature became the Great Mother of Vegetation, the Earth Mother, the Mother of Heaven, the Mother of the Gods.

The numerous cults of female goddesses no doubt caused woman's social status to rise, and the old moral tradition of woman's equality must have been revitalized. Hence, when trade began to flourish between farming villages, and important village centers like Babylon or Rome became in turn city states, then kingdoms, and then empires, women began in a modest way to enter public life as the wives and daughters of big traders and merchant princes. Thus the stage was set for the first battles in Egypt, Babylon, Crete, and Phrygia, between feminists and antifeminists, for the improvement of woman's social and economic status.

Throughout the so-called Dark and Middle Ages, women seldom glimpsed a silver lining to the cloud of gloom in which they were enveloped. True, their existence had its ups and downs, as even a prisoner's existence does. But there was no essential change in woman's lot until the Industrial Age made it so abysmally worse that women became one of the fiercely resentful, though not yet organized, minorities that precipitated the French Revolution.

In the United States and Great Britain, the counter-revolutionary backwash also swung public opinion against feminism for a generation. The movement experienced a rebirth when John Stuart Mill became its champion through the London publication in 1869 of *The Subjection of Women*. This book became the Bible of feminism in every Western country, including the United States. Mill stressed woman's right to vote and to hold public office, not as ultimate goals by any means, but as essential first steps in the struggle for total equality. Fired by Mill's book, woman suffrage societies sprang up all over Europe and the United States. In Scandinavia, Camilla Collatt and Ellen Key tried to put Mill's precepts into practice; and their work, in turn, accelerated all English-speaking activity. For the first time in history, the feminist movement took to *Realpolitik*.

In 1897 the foundation of the National Union of Women's Suffrage Societies in London intensified the agitation for woman suffrage. The men and women feminists, who regarded the vote as merely a first step, concentrated on the suffrage problem in Parliament, on the platform, and in the press. Bernard Shaw, the great dramatist and brilliant Fabian pamphleteer, wrote a devastating reply to Sir Almroth Wright, a leading medical specialists who had publicly expressed his belief that woman was biologically and psychologically man's inferior. Mrs. Emmeline Pankhurst and her daughter Christabel transformed the peaceful suffrage movement into a violent, or "militant," affair that turned England upside down and forced the antifeminist Prime Minister Asquith to enfranchise women in 1917. In the United States, the suffrage movement justified itself by platform vigor or street propaganda rather than by acts of lawlessness. American women obtained the vote peacefully through the 19th Amendment to the Federal Constitution, in 1920.

The vote got the headlines. But it was only the outward and visible sign of the inward and spiritual force of woman's demand for equality. In both Great Britain and the United States, the 20th century has been marked by woman's invasion of the universities and medical, law, and engineering schools, the trades, the handicrafts, and various other professions. The multiform services that women performed during two world wars removed every plausible objection to the moral principle that woman is man's equal. ♦

*The learning and knowledge that we have, is, at the most, but little compared with that of which we are ignorant.*—PLATO

# THE MEANING OF LIBERAL EDUCATION

*from the Wisdom of Encyclopedia Americana*

LIBERAL Education is the name traditionally given to that stage of education which concerns itself with the development of a student's intellect. Earlier stages of education, the elementary and the secondary, are assumed to have trained his memory and to have made him proficient in the rudiments of reading, writing, and figuring. Later stages, it is likewise assumed, will make him finally proficient in a profession or in a special area of knowledge to which he may make in time his own contributions. In the liberal or pivotal stage, however, he is expected to take possession of his individual mind and to discover the uses to which as he grows older it may best be put. This is the college stage, midway between school and university; and it is called liberal because of the faith that now the student becomes free of his childhood and free therefore to think or feel as an adult. He does not necessarily become wise; it is still too early for that; but without the disciplines encountered at this stage he will never be free to advance in the direction of wisdom. This is his initiation into humanity as humanity has always been known: man's distinguishing feature is his intellect—his reason and his art—and to be possessed of this feature is to be made free as only men are free.

The use of the term "liberal" to denote such studies as these is as old as Greece and Rome in their great days, or as is often said, in classical days. But the word then carried a limited meaning which in later centuries has ceased to apply. It meant the education of men who were free because they were not slaves; it sometimes meant no more than the education of gentlemen, of members of the ruling or leisure class. With the disappearance of slavery in Europe, such an understanding of the term became of course unsatisfactory, although for centuries there was a lingering suggestion that the education referred to was a privilege reserved for the fortunate few whose wealth exempted them from the need to enter trades or professions. In more recent times the suggestion has died its natural death. Yet the importance of liberal education, far from declining, has increased until it now excites the concern of all those who desire the continuation of health in society as such.

The Greek conception of education, best expressed by Plato in his dialogues, saw it as mathematical no less than philosophical and literary, since the arts of measurement were dear to the Greek genius at its best. The Romans, who were not primarily scientific men, though they were excellent engineers, applied the term "liberal" to that narrower field of studies which in subsequent centuries became known under the name "humane letters." The distinction still persists. It is not uncommon for educators to mean by liberal education everything except mathematics and science—literature, for example, philosophy, psychology, and history. But the medieval universities were Greek rather than Roman in their understanding; the liberal arts as they taught them were not only the arts of discourse (grammar, rhetoric, and logic) but the arts of manipulation and measurement (arithmetic, geometry, astronomy, and music). The first three were called the trivium, and the second four were called the quadrivium. It was the medieval assumption that all seven were essential to human thought. And this assumption remains valid in a time when it is more than ever clear that the human mind has operated with quantities quite as often as it has with qualities; the culture of man is half moral, half mathematical. The great books in the European tradition include those of Ptolemy, Galileo, Sir Isaac Newton, and Albert Einstein as well as those of Plato, Aristotle, William Shakespeare, and Leo Tolstoy. Indeed it is those great books that contain the tradition with which liberal education finally has to do. Perhaps it is not a mere coincidence that the Latin word *liber* meant both "book" and "free." ♦

# GREECE

*the cradle of civilization*

*from the Wisdom of Encyclopedia Americana*

DEVELOPMENTS in Greece after 500 B.C. were highly significant for modern advanced education, largely as a result of the teaching of such philosophic schools as the Sophists. Learning was less highly organized and controlled than in Egypt; students gathered around great teachers without benefit of formal organization or government sponsorship. The School of Pythagoras, Plato's Academy, Aristotle's Lyceum, and the rhetorical schools of Isocrates—often cited as forerunners of medieval universities—were conducted in what might be called converted residences, quite inferior physically to the elaborate structures of the Ptolemies. Until the 1st century B.C., Greece had nothing like the Alexandrian Library or the government-supported academies. Yet nowhere was scholarly effort more intense and more significant for the future than in the Greek and Ionian peninsulas. Scholars were free—at least until the 3d century B.C.—to follow the light of the intellect wherever it might lead. Students and teachers were self-governing and were generally responsible only to each other; the state reserved the right to curb only such teachings as were deemed subversive. Subsequently state control tightened and advanced education was held to fairly rigid norms. The ephebic college, for example, evolved from an informal civic institution to a fashionable military academy that catered to an aristocratic elite.

In the Hellenistic area (after 300 B.C.), advanced education developed along two main lines: the one under state aegis; the other typified by Epicurus' school called The Gardens and the school of Zeno, which was held in a portico or *stoa*—hence the name Stoics. Such schools as these, taken collectively, have been termed figuratively the "University of Athens." There were, however, no licensed faculty members, no examinations, and no granting of degrees or licenses. Although teachers on the higher levels were held in great esteem, they were exposed to heavy political pressures on occasion: Socrates was condemned to death, Plato and Aristotle had to flee abroad, and many "gymnasiarchs" were ostracized on the flimsiest charges.

Higher learning in Greece was based on concepts of the proper use of leisure time; *schola* meant "leisure," or the activities of a freeman directed to the fullest appreciation of life. Hence the term, "liberal" education, from the Latin *liber* meaning "free," in contrast to "vocational" or "professional" education, which prepared men to earn a living.

Athens was the leading center of advanced education from the 5th century B.C. until the 6th century A.D., when the Emperor Justinian banned (529) "pagan" teaching throughout the Roman Empire and closed the Platonic Academy at Athens. During this period in the Graeco-Roman world, the content of higher education became universal in scope. This inclusive view of education ultimately led the Roman scholar Marcus Terentius Varro (116–27 B.C.) to classify learning into nine liberal arts, which were to form the basis of the medieval trivium (logic, grammar, rhetoric) and quadrivium (music, arithmetic, geometry, and astronomy). Varro included medicine and architecture as well. In the 2d century A.D., instruction became somewhat more formalized when the Roman emperor Marcus Aurelius endowed five chairs at Athens: one for rhetoric, and one each for Platonism, Aristotelianism, Epicureanism, and Stoicism—reflecting the further fact that no one school ever became dominant in Greece. ♦

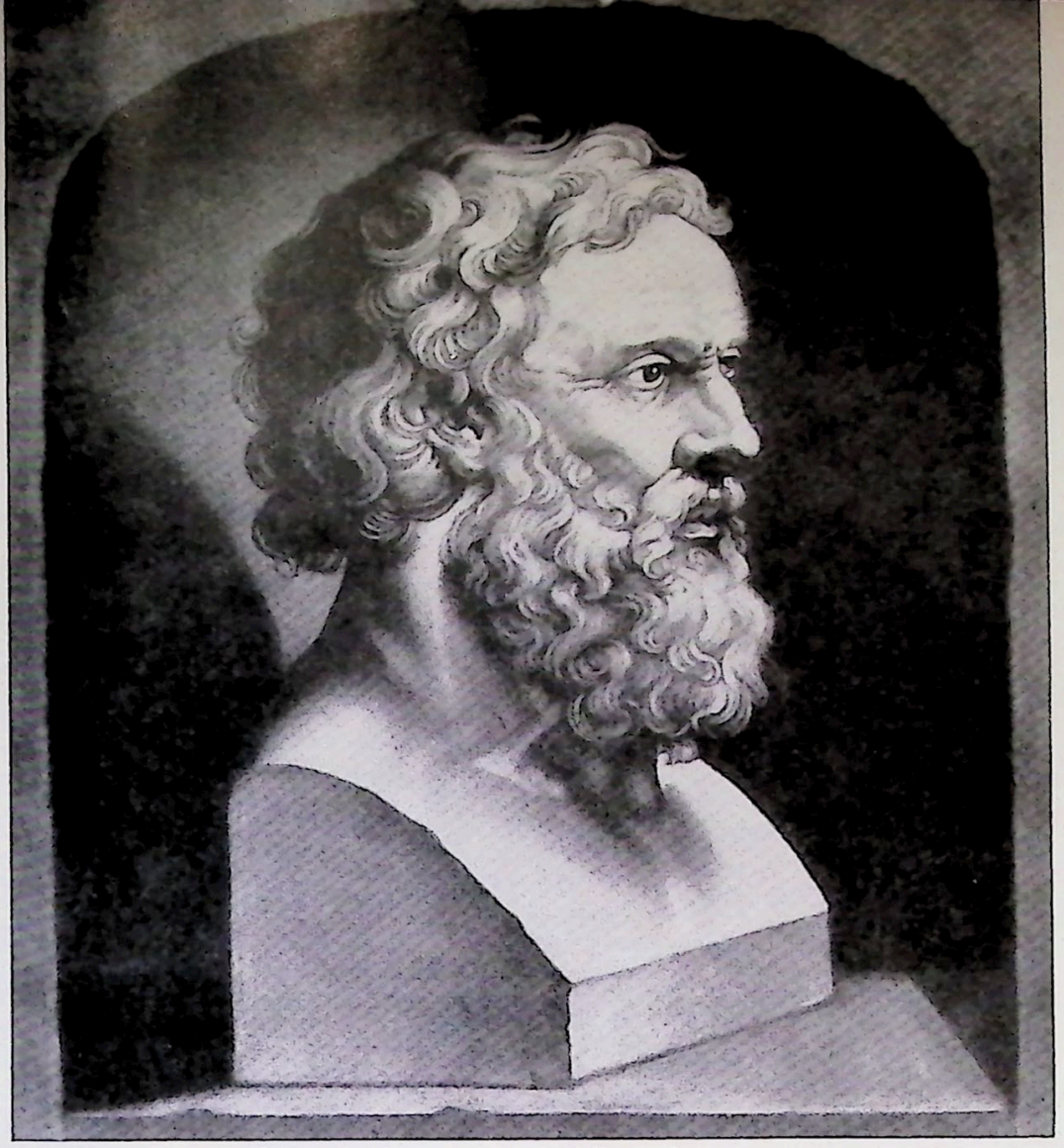
***Greeks developed their columns to a high degree of perfection from two sources; one, a modification of Aegean prototypes, the other from Asiatic design.***

*Zeus, Greek thunder-god of the sky, who sent rain, wind and all that fell from heaven; wearing the Aegis, symbolic of the storm-cloud.*

*The Parthenon, temple of the virgin Athena, on the Acropolis in Athens, Greece, was erected in the time of Pericles, under the supervision of the sculptor Phidias.*

*The Acropolis of Athens, its lofty religious center, held temples, statues, theatres, and music halls. It was erected of marble with delicate frieze and sculpture in 500-400 B.C.*

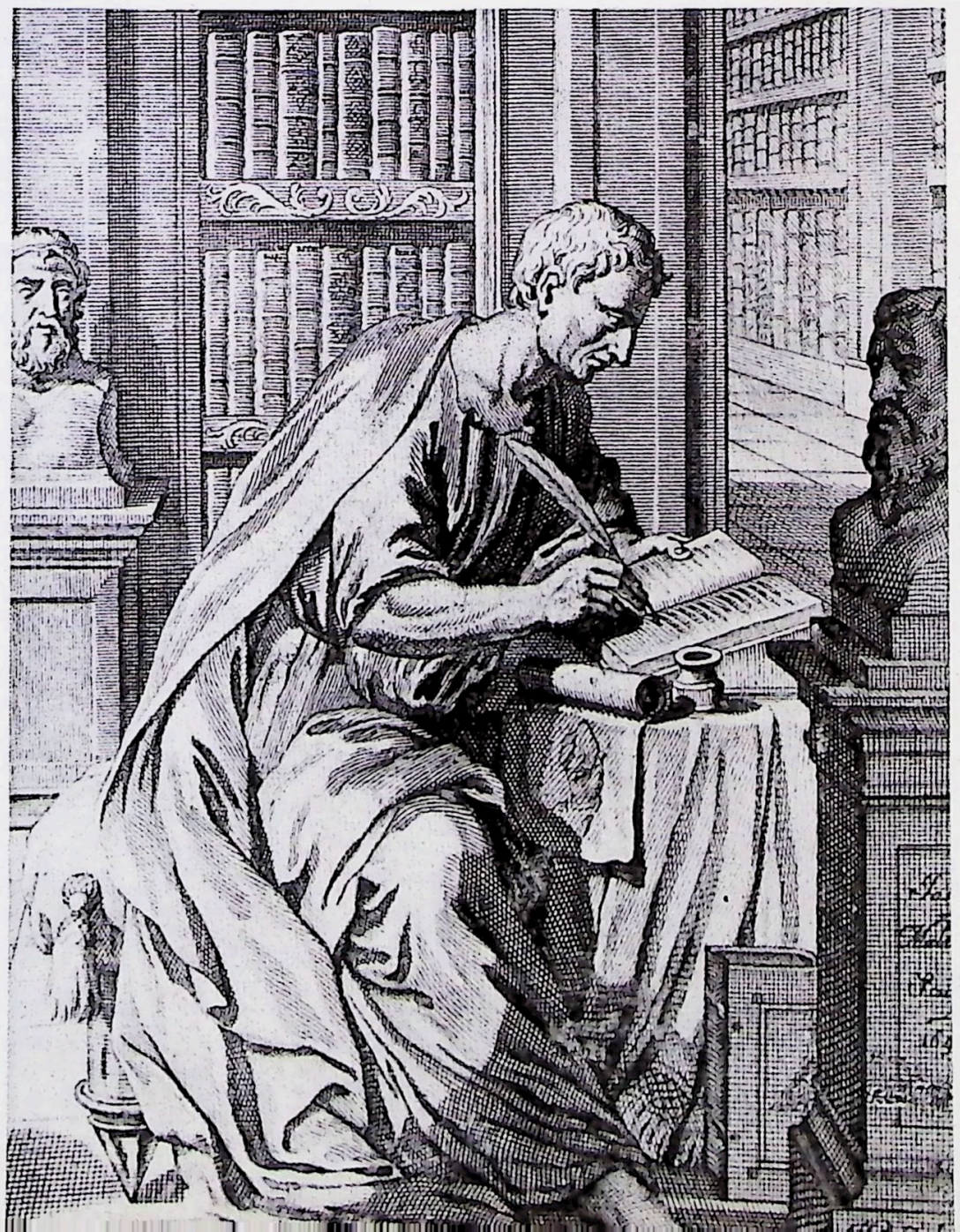
*Greek relief of Maenad, leaning on her thyrsos, is representative of sculptured art of the 5th century B.C.*

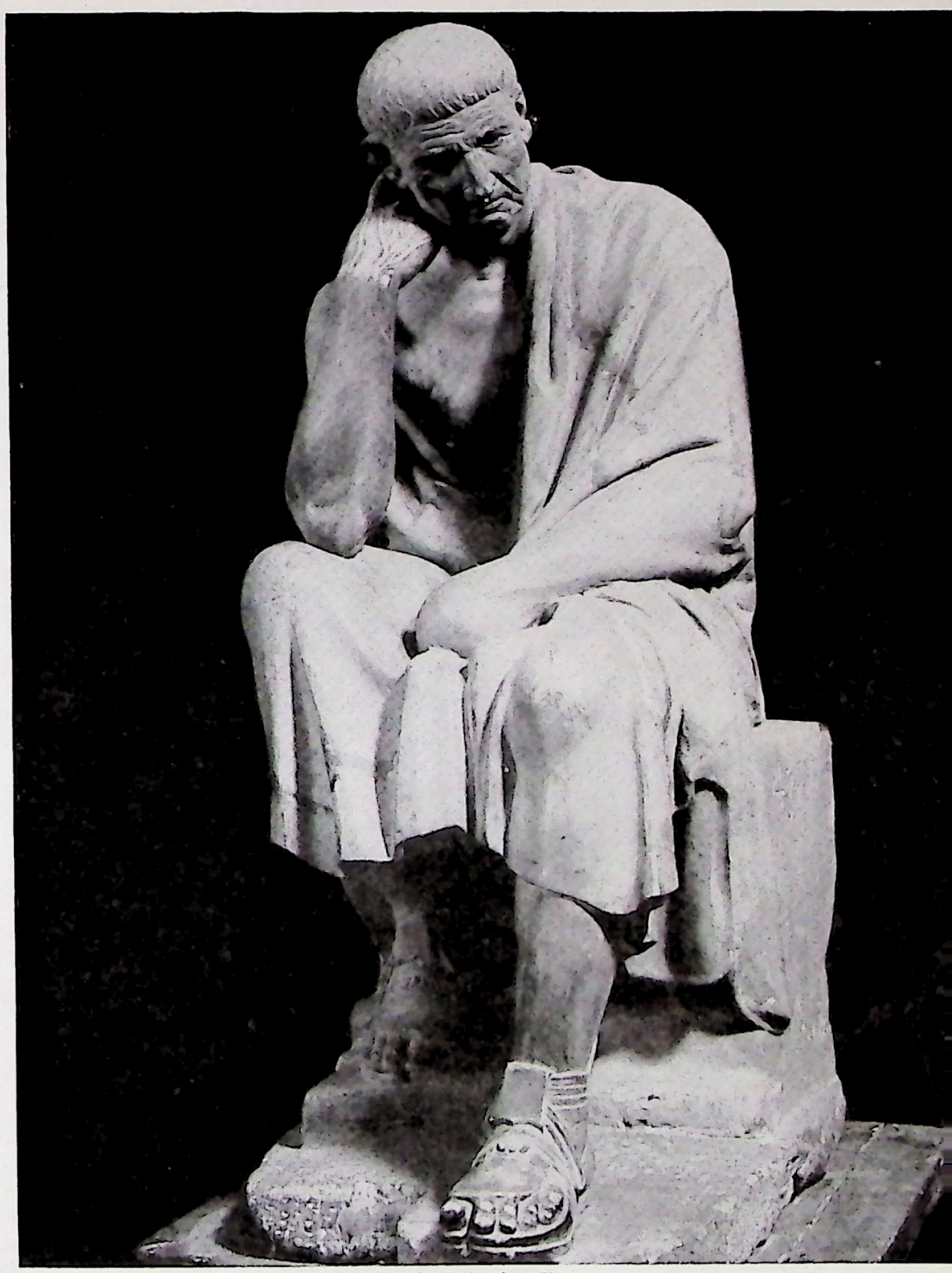


*Plato (427-347 B.C.), creative genius of philosophy, whose ideas, writings, treatises, essays, and Socratic dialogues touched on almost every aspect of human life and illuminated them.*

*Socrates (469-399 B.C.), inspiring teacher, great scholar and wise philosopher, whose blunt ideas and strong beliefs wielded considerable power and greatly influenced the thinking of his brilliant disciple, Plato.*

*Cicero (106-46 B.C.), jurist, orator, author, statesman and scholar, whose extremely large literary output consisted of brilliant orations, rhetorical works, philosophical essays, and collections of letters.*

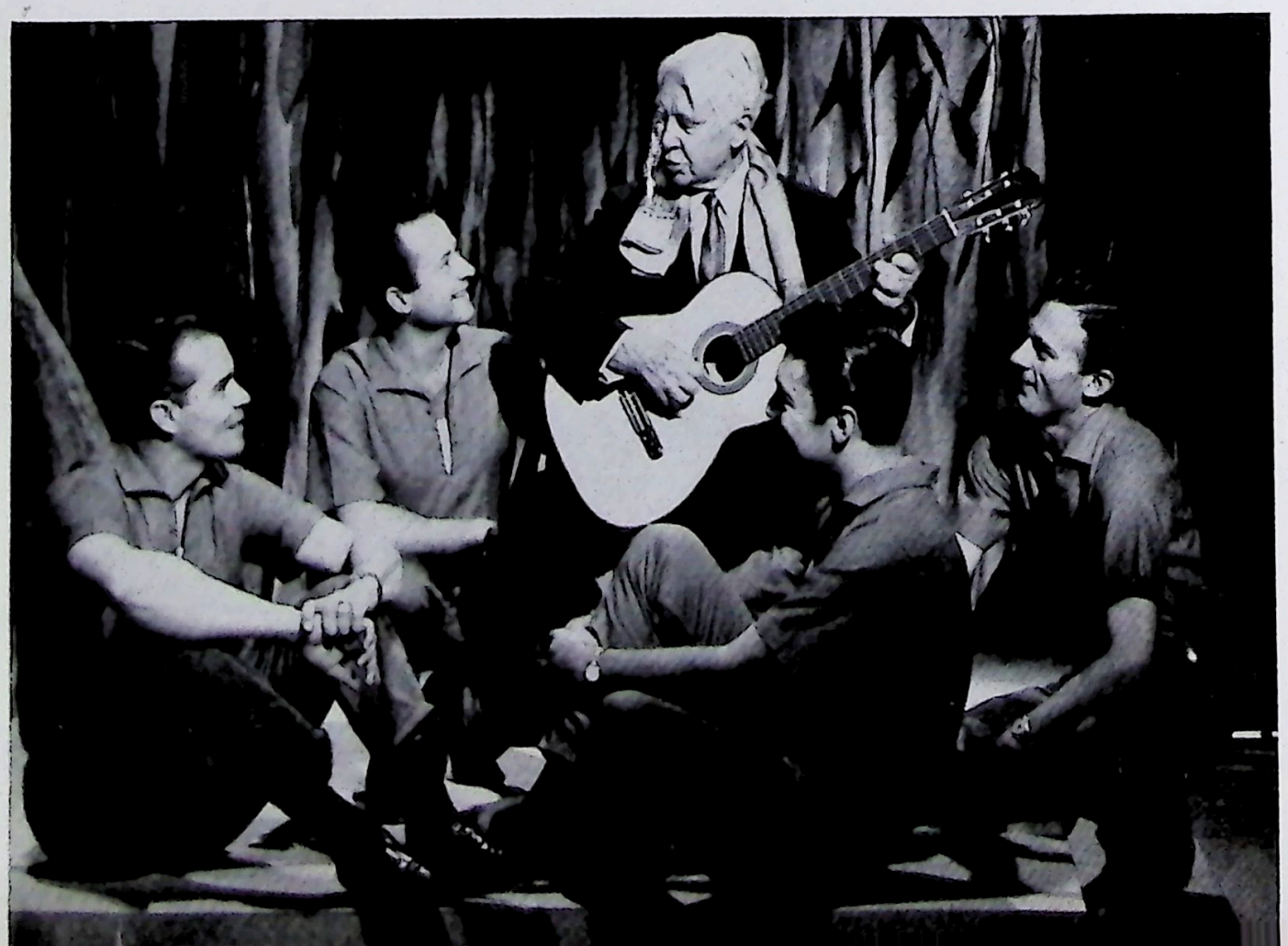




*Aristotle (384-322 B.C.), master mind of the intellect, whose monumental philosophic thought has influenced men's thinking for over 2,000 years, was a pupil of Plato, tutor of Alexander the Great, and teacher of the intellectuals of Greece.*

# Carl Sandburg

**AMERICA'S GREAT AND BELOVED LEGENDARY POET–BIOGRAPHER–NOVELIST–HISTORIAN–SINGER OF FOLK SONGS REACHES 81 YEARS**



*His is the earthiness of the prairies, the majesty of the mountains, the anger of the deep inland seas. In him is the restlessness of the seeker, the questioner, the explorer of far horizons, the hunger that is never satisfied.*—ADLAI E. STEVENSON

*by Alan Jenkins*

CARL SANDBURG is eighty-one years old. He was born on January 6th, 1878, in Galesburg, Illinois. His father at the time had been in this country nine years, his mother five; both were from Sweden, and they were both quietly religious. They often read in the family Swedish Bible (the father could read but not write); they had moral balance rooted in Swedish Methodist and Lutheran piety. August Sandburg earned fourteen cents an hour at heavy labor in the shops of the Burlington Railroad; it was a sixty-hour week. The fact that with this modest income August and Clara Sandburg could buy a house as well as feed and clothe seven children (Carl was the second) points to thrift, temperate living, and both physical and spiritual strength. Shortly before her death the poet's mother wrote: "With thought and love in the home so much can be overcome."

In 1878 our nation was still dominantly agricultural, nine out of ten people being on the land. Big business, symbolized by the Eastern banks, was calling the tune economically and politically; farmers and city workers were beginning to organize; big government was some years off. Edison had just developed a talking machine and was now, in 1878, perfecting the incandescent light. Automobiles were more than a decade away. Over in Europe, already torn by its many wars, this was the year of the Treaty of Berlin. Rutherford B. Hayes was President of the United States. I mention such facts by way of suggesting how long ago it was, in terms of social, economic, and other change, that Carl Sandburg was born. And I have not mentioned World Wars, a global depression, man-controlled nuclear fission, and Sputnik.

Carl Sandburg is in some ways the most remarkable living American. Certainly in literature, for the variety and quality of his work, he is in a special class. He is our number one Lincoln biographer, an auto-biographer, one of our chief bards, a famous collector and singer of folk-songs, a writer of children's tales, a novelist. He finds time for occasional TV appearances, radio interviews, platform verbal fireworks and songs. He continues to be, at eighty-one, the most photogenic and the most photographed of our literary celebrities. He keeps reappearing, like the atom and nuclear fission, in feature stories in a wide variety of magazines.

Sandburg is much more than a noted writer. He had become, in his own life-time, one of our major American folk-figures. With his rugged features, independent mind, outspokenness, democratic ways and ideals, and commanding personality, plus a certain carefreeness (in language, dress, etc.), he has come to embody the colorful individualism that is no longer in vogue in the United States but that most Americans like to think of as typically American. Once identified with the Mid-west, this prairie-poet, like an Illinois lawyer before him, has become a beloved figure—a kind of Mr. United States with a guitar under his arm. At the same time Sandburg is beloved by many in his ancestral Sweden and in other lands; he has universal appeal. In a way, he is also a Mr. Family-of-Man.

The secret of Sandburg's stature, in literary production and in personality, is essentially religious. By "religious" I do not mean anything conventional, like denominational connection (he has none), institutional creed, or church attendance. A religious person, in my books, may be defined as one whose dominant desires relate to certain spiritual values in a context of faith. Sandburg is such a person.

We shall now think about some of the prayers of this famous man, remembering that, as an old hymn tells us—

*Prayer is the soul's sincere desire*
*Uttered or unexpressed.*

Of course the "soul's sincere desire" of any true artist finds continuing expression in his work, and there is a parallel to this in each of our lives. As Emerson wrote: "It is not only when we audibly and in form address our petitions to the Diety, that we pray. We pray without ceasing. Every secret wish is a prayer"—and he goes on to say that prayer, so conceived, always in some way finds extension in our lives. In the case of Sandburg, the "secret wish" or prayer is not only implicit in his work. Being a highly articulate artist with a distinctly religious bent, he has written prayers immediately identifiable as such. As I bring some of these to your attention, you will be remembering, I am sure, that here we have some keys to a great life—keys that all of us can use in making our lives more significant.

The first key is that of dedication. From early youth on, Sandburg has had a monk-like devotion to his work. The way he toiled over eleven years in the writing of *Abraham Lincoln, The War Years* (its 1,125,000 words exceeding those in the Bible by 270,000) was nothing less than heroic. In the preparatory stages he would work ten hours or more a day over long periods of time collecting, sorting, and filing (in 300 boxes) many thousands of historical notes. He bought two thousand source volumes, keeping only the pages useful to him. When he had finished the first draft of the four volumes, he wrote to a friend: "As I look at what the completed work will be, I say to myself that if I had not faithfully plodded through every last piece of essential material that I could lay my hands on, I would feel guilty." That's dedication.

In *Prayers of Steel* Sandburg gives vivid expression to this spirit of whole-hearted devotion to a task.

*Lay me on an anvil, O God.*
*Beat me and hammer me into a crowbar.*
*Let me pry loose old walls.*
*Let me lift and loosen old foundations.*
*Lay me on an anvil, O God.*
*Beat me and hammer me into a steel spike.*
*Drive me into the girders that hold a*
*skyscraper together.*
*Take red-hot rivets and fasten me into the*
*central girders.*
*Let me be the great nail holding a skyscraper*
*through blue nights into white stars.*

Many of his poems, such as this, reveal Sandburg as an American psalmist—both in the form of the poem and in its thought and underlying spirit. As a modern psalmist, he naturally uses industrial metaphors as well as those drawn from nature. "Let me be the great nail holding a skyscraper through the blue nights into white stars" is his counterpart of "Let me be like a tree planted by the rivers of water that bringeth forth fruit in its season."

A second key to Sandburg is humility—the kind that does not exclude a proper regard for self and awareness of personal achievement. In his late teens Sandburg discovered a poem that was a favorite of Abraham Lincoln. It was called, after its first line, "Oh, why should the spirit of mortal be proud?" In numerous melancholy stanzas this poem rang the changes on the psalmist's "Man's days are as grass." The young man, finding the verses much to his liking, memorized many of them. Fifty years later, in his novel *Remembrance Rock,* Sandburg put a beautiful prayer in the mouth of one of its main characters. It begins "Thou, O Lord of Hosts . . . Thou whose identifying prints are on the faces one and all we meet . . . help us to chasten our hearts and be humble." The prayer ends: "Of the seven deadly sins Thou hast, O Lord, made pride the first and deadliest, wherefore first of all we ask Thee to teach us the requirements and needs of the humble. We ask it in Christ's name. Amen." This is not only Omri Winwold's prayer; it is that of the poet-biographer-novelist who, in his youth, prized a poem beginning "Oh, why should the spirit of mortal be proud?"

The fact that Sandburg has been a learner all his life traces in part to his essential humility, for it is only the humble who can truly learn. In *Always the Young Strangers,* the first volume of his autobiography, he recalls that in his twenties "I said I would listen and read and ask and maybe I would learn. By guessing and hoping and reaching out I might get hold of some of the answers." At eighty Sandburg is still hoping to "get hold of some of the answers."

A third key to this unusual man is compassion. In early manhood

he wrote a prayer that included the petition "Give me . . . a tender feeling for all the despised, rejected, and forsaken of mankind." Sandburg has always been known for his large and ready sympathies. Open one of his books of poems at random and you are apt to come across lines that have in them the tenderness of a mother singing a lullaby to her child. The way some people use others; the moral lostness of so many people; the insanities of war; the tragedies not of man's making ("We asked the cyclone to go around our barn but it didn't hear us"); the ignorances of the wise; the stupidities of the clever; the normal burdens and griefs of life—such things have stirred the compassionate in Sandburg and are part of the steady heart-beat in his writings. In his Socialist days his compassion centered largely about the economic underdog. But as his cultural and humanitarian horizon widened, his prayer became "Give me . . . a tender feeling for all."

Child-heartedness is a fourth trait of Sandburg, a fourth key to his spirit. Aonther prayer that he wrote as a young man goes: "Failure, as the world sees it, and disgrace and defeat, O Lord, we can endure. But renew in us always the child heart, alive with the hope and romance of endeavor?" "Renew in us . . . the child heart."

Someone has written: "There is in every human being's heart the love of wonder, the sweet amazement at the stars and star-like things, the challenge of events, the unfailing child-like appetite for what-next, and the joy of the game of living." This is true. It is also sadly true that many of us, as we age, lose our capacity for wonder, our "child-like appetite for what-next." Not so Sandburg. Out of many illustrations of this fact that could be given, let me give you three out of my own comradeship with him. When he was sixty-eight I was with him when he played a midnight practical joke (completely harmless) on some Galesburg, Illinois, city firemen (we were visiting the fire-station where he once drove the horses); I can hear now his hearty "Ho-Ho!" at their astonishment. I was with him when, seven years later, he called upon a friend who, when he was at Lombard College, gave him two or three singing lessons, the only ones he ever had. Instead of ringing the bell, Sandburg, in a playful mood, stood outside the door and lustily sang a few notes. Again, I recall the boyish twinkle in his eyes when, in his youthful seventies, he almost used the wrong pronoun at the dinner table, then turning to me said with a chuckle "We verged on the ungrammatical that time." The last sentence of *Always the Young Strangers* goes: "If it can be done, it is not a bad practice for a man of many years to die with a boy heart." Carl Sandburg is eighty-one years young, an octogenarian with a boy heart.

Thankfulness is also a Sandburg trait, especially thankfulness for common blessings. I have heard him say more than once: "I'm thankful that I'm ambulatory, that they keep paying me for what I write, and that I'm out of jail." His poem *Glass House Canticle* is a psalmic prayer of praise and thanks.

*Bless Thee, O Lord, for the living arc of the sky over me this morning.*
*Bless Thee, O Lord, for the companionship of night mist far above the skyscraper peaks I saw when I woke once during the night.*
*Bless Thee, O Lord, for the miracle of light to my eyes and the mystery of it ever changing.*
*Bless Thee, O Lord, for the laws Thou hast ordained holding fast these tall oblongs of stone and steel, holding fast the planet Earth in its course and farther beyond the cycle of the Sun.*

In a book called *Natural Theology*, its writer, William Paley, says: "One great cause of our insensibility to the goodness of the Creator is the very extensiveness of His bounty . . . When we hear of blessings, we think forthwith of successes, of prospering fortunes, of honors and riches . . . The common benefits of our nature entirely escape us. Yet these are the great things . . . Nightly rest and daily bread, the ordinary use of our limbs and senses and understandings, are gifts which admit of no comparison with any other." How many of us remember to be thankful for "nightly rest and daily bread," for the fact that we can move our arms and legs—and that we are out of jail? Sandburg is thankful for such things and, in his compassion, he remembers those who are not so lucky. ♦

# A BIOGRAPHY OF

# Carl Sandburg

ON JANUARY 6, 1878, Carl Sandburg was born to Swedish immigrant parents in Galesburg, Illinois. He worked before and after school from the time he was eleven; when he finished grammar school at fourteen, his first full-time job was driving a milk wagon, often in prairie blizzards. After that came jobs in a barber shop, a tinsmith shop, a pottery, a bottling works, harvesting ice in Illinois zero weather and wheat in Western Kansas, washing dishes in Kansas City, Denver, and Omaha. These early jobs in the cities and in the open spaces of America equipped him, as no amount of learning could have done, to be the poet of industrial America.

He saw active service during the Spanish-American War as a member of Company C, Sixth Infantry Regiment of Illinois Volunteers. On his return from the campaign in Puerto Rico, Sandburg entered Lombard College in Galesburg, working his way through, but finding time also to edit the college paper and captain the basketball team. After leaving college, he did all manner of things to earn a living. He was a stereograph salesman from door to door and farm to farm, a fireman, advertising manager for a department store, secretary to the Mayor of Milwaukee, a pamphleteer, a newspaperman. In 1908 he married Lillian Paula Steichen, sister of Edward Steichen the photographer.

Until he was thirty-six years old, Sandburg was totally unknown to the literary world. In 1914 a group of his poems appeared in *Poetry,* and during the same year one of the group—the now famous *Chicago*—was awarded the Levinson Prize. A little more than a year later, *Chicago Poems,* his first book, was published, and Sandburg had "arrived." His second volume of poems, *Cornhuskers,* followed in 1918 and shared the Poetry Society Prize that year. Since then more than thirty books by Sandburg have been published, each adding to his stature. They cover a wide range—from the humorous Rootabaga stories for children, and an appreciation of the photographic genius of his brother-in-law, *Steichen The Photographer,* to his great poetic work, *The People, Yes,* and to the six volumes of his classic biography of Lincoln, *The Prairie Years And The War Years.* The latter won the Pulitzer Prize for History in 1940, a work to which, it has been reported, President Roosevelt went for counsel and faith during World War II.

Mr. Sandburg contributed a weekly column to newspapers of the Chicago Times Syndicate during World War II, and many of these pieces later appeared in his book, *Home Front Memo,* published in 1943. He also wrote the commentary for a U. S. Government film, *Bomber,* as well as the captions for Steichen's photographic exhibit *Road to Victory,* and he made foreign broadcasts for the Office of War Information.

In 1948, Mr. Sandburg's first novel appeared—*Remembrance Rock,* a portrait of America through three and a half centuries. *Lincoln Collector*: The Story of Oliver R. Barrett's Great Private Collection, was published in 1949. This is the story of the amassing, over sixty years, of the foremost private collection of Lincoln letters, documents, relics, and related source materials.

Carl Sandburg's *Complete Poems* was published in 1950. This definitive collection contains the full body of Mr. Sandburg's poetic work and spans the years from 1910 to 1950. In the volume are all the poems contained in his six volumes of poetry—*Chicago Poems*; *Cornhuskers*; *Smoke and Steel*; *Slabs Of The Sunburnt West*; *Good Morning, America*; and *The People, Yes*—plus a New Section of seventy-two poems not hitherto collected. About half of these latter poems appear in print for the first time, among them Mr. Sandburg's most recent work. In addition he has written a preface which discusses his long career as a writer. *Complete Poems* was awarded The Pulitzer Prize for Poetry in 1951.

Mr. Sandburg's first volume of his autobiography, *Always The Young Strangers,* is the story of his youth in the small town in which he was born, of his family, and of his friends and neighbors. *Always The Young Strangers* was published on January 6, 1953, the author's seventy-fifth birthday.

The One-Volume Edition of *Abraham Lincoln*: *The Prairie Years And The War Years* was published in 1954. Mr. Sandburg made this distillation of his six-volume biography of Lincoln because of the demands of readers who wanted this classic work in more compact and less expensive form. In 1955 a book for young people drawn from *Always The Young Strangers* appeared under the title of *Prairie-Town Boy. The Sandburg Range,* a representative selection of Mr. Sandburg's entire work, was published in 1957.

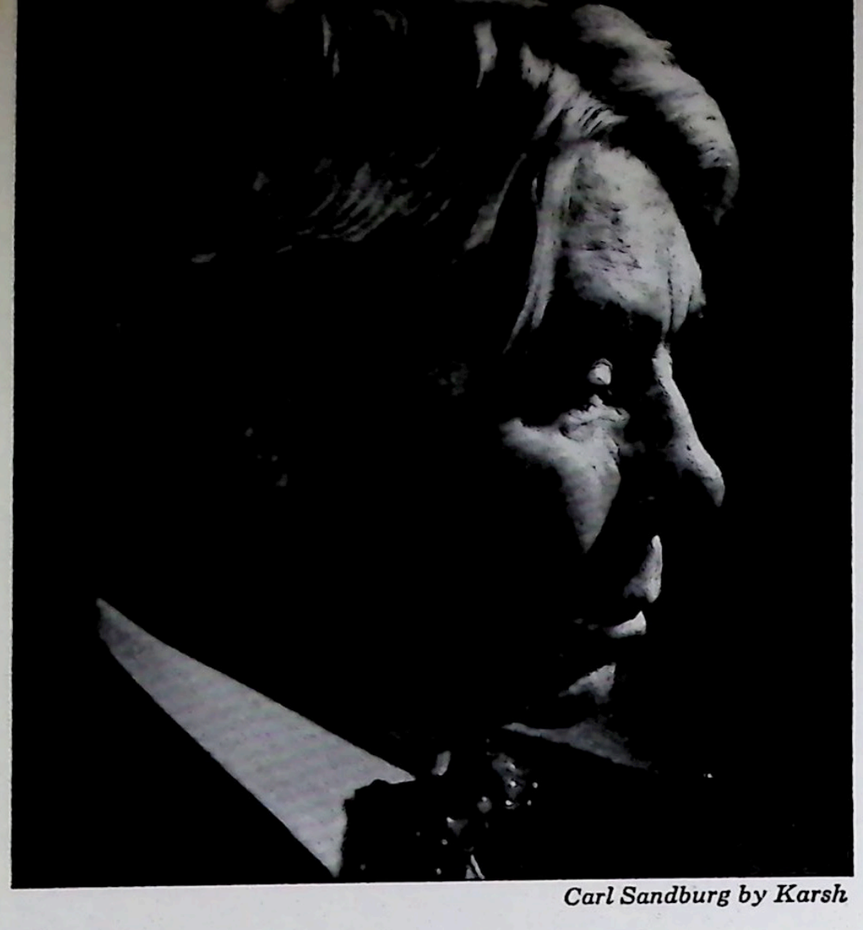
Seldom has a living author been given recognition in so many fields as Carl Sandburg. The little Galesburg cottage in which he was born, was dedicated in 1946 as a literary shrine. His photograph has been featured on front covers of the important literary media. Lecture audiences throughout the country know him for readings of his poetry and for his inimitable guitar-playing and ballad singing. And there is still another facet to the Sandburg fame: his goat farm is among the best known throughout the country, and Mrs. Sandburg has long been recognized as a leading authority on breeding and raising blooded dairy goats.

Colleges and universities both here and abroad have bestowed honorary degrees upon Mr. Sandburg. In 1928 Lombard College, where he had studied from 1898 to 1902, conferred on him the degree of Doctor of Letters—a degree which has also been given to him by Knox College (1929); Northwestern University (1931); Harvard University, Yale University, New York University, Wesleyan University, Lafayette College (1940); Syracuse University and Dartmouth College (1941). He received the degree of Doctor of Laws from Rollins College in 1941 and from Augustana College in 1948; and in 1950 Uppsala University in Sweden conferred on him the degree of Doctor of Philosophy. In 1959 the degree of Doctor of Letters was conferred on Mr. Sandburg by Upsala College in East Orange, New Jersey and by the New School for Social Research in New York City.

In 1952 the American Academy of Arts and Letters awarded their Gold Medal for History and Biography to Mr. Sandburg. The Poetry Society of America's gold medal for distinguished achievement was awarded to him in 1953, and in 1955 he received the Boston Arts Festival Award in recognition of "continuous meritorious contribution to the art of American poetry." A scroll hailing him as "the Lincoln of our literature" and "the voice of America singing" was presented to him by the Civil War Round Table of New York in 1954. In honor of his appearance for *Poetry* magazine's second annual Day of Poetry, the Mayor of Chicago officially proclaimed November 18, 1956, Carl Sandburg Day. Earlier in 1956 the Albert Einstein Award was bestowed on Mr. Sandburg.

Several institutions of learning now bear his name—including The Carl Sandburg Elementary School in Harvey, Illinois, and the Carl Sandburg High School in Orland Park, Illinois. In 1956 the University of Illinois acquired Mr. Sandburg's manuscripts, books, and papers, and plans to build a special room at the university to hold the collection.

With their three daughters the Sandburgs lived in the Midwest until 1945, when they moved to Flat Rock, North Carolina, to get away from the rigorous Lake Michigan winters. They are devoted grandparents of the two children of their married daughter, now living in Virginia. ♦



*Carl Sandburg by Karsh*

# from the Wisdom of CARL SANDBURG

All my life I have been trying to learn to read, to see and hear, and to write.

The book! . . . In the matter of the book you have choice. You can go to the shelf and pick out the book for your mood that day, and as you go along the pages you can skip what you find stupid, you can mark the pages, you can put markers where there are passages that do things to you, that give you a certain sacred music for the growth of your personality.

Money buys everything except love, personality, freedom, immortality, silence, peace.

My Lincoln biography is probably the only book ever written by a man whose *father* couldn't write his name, about a man whose *mother* couldn't write hers.

How do I account for the way in which Americans seem to just soak up information and knowledge of Lincoln? Because he's a titanic character, with mystery attaching to him—all the mystery that attaches to the word "democracy," and that other phrase, "the American dream." It's there in him more than in any other one man. Jefferson had it greatly, Washington too. But somehow or other Lincoln is closer to the people and he's closer to storm, a kind of storm that we're going through now. In a certain sense there's a global civil war going on now; and he was the mastermind of an awful civil war, a war of brothers.

There is such a thing as creative solitude—a certain kind of loneliness out of which have risen the works of the creative spirits of the past. They were not afraid of being alone; they had learned how to use their loneliness.

Isn't there a case to be made out for the man who pointed out a verity in saying, "I don't know who my ancestors were but we've been descending for a long time"?

At sixty-five I began my first novel, and the five years lacking a month I took to finish it, I was still traveling, still a seeker. I should like to think that as I go on writing there will be sentences truly alive, with verbs quivering, with nouns giving color and echoes. It could be, in the grace of God, I shall live to be eighty nine, as did Hokusai, and speaking my farewell to earthly scenes, I might paraphrase: "If God had let me live five years longer I should have been a writer."

The moon is a lovely woman, a lonely woman.

I am still studying verbs and the mystery of how they connect nouns. I am more suspicious of adjectives than at any other time in all my born days.

Movies, Radio, TV . . . I am disgusted. The habit grows of sitting up to them, sitting up to those machines, listening and looking for hours on hours on hours. There are good things to see and hear in them, priceless things, but for those who are not on the watch, these machines are thieves of time, with not even a mechanical conscience about the hours and hours they will waste in a day.

The facts and myths of Lincoln's life are to be an American possession, shared widely over the world, for thousands of years, as the tradition of Knute or Alfred, Lao-tse or Diogenes, Pericles or Caesar, are kept. This because he was not only a genius in the science of neighborly human relationships and an artist in the personal handling of life from day to day, but a strange friend and a friendly stranger to all forms of life that he met.

Abraham Lincoln was a dreamer and a man of reverie, as all poets are, while at the same time he had the practicality of an Edison—a combination you don't often find. Besides, he was endowed with a New Testament patience and an Old Testament stubbornness.

No two persons register precisely the same to a work of art.

Why did my father, with his exceptional manual cleverness and variety of skills, never learn to write? Had he cared to will to write he could have learned to write the letters of all the words he knew. The desire wasn't there. He never cared for books. Life seemed to have enough stories for him without storybooks. In our early childhood years he read to us from the Swedish Bible but seldom till later years did we see him spend hours or half-hours reading it for companionship or the learning of wisdom from it or any music its verses might have for him. When there was big news the others gave it to him. The reading habit never got him. He had some kind of a natural superiority to books. Several times when I had my boy head in a book he said with no touch of fun in it, "Sholly, you read too much in de books—what good iss it?" Printed words, written sentences, had no charm or mystery for him. They were outside of his needs, prayers, or wishes.

Any language is a lot of words and if you know the words you know the language.

Walt Whitman saw Lincoln as "the grandest figure on the crowded canvas of drama of the nineteenth century." In the story of a great pivotal figure at the vortex of a vast dark human struggle, we meet gaps and discrepancies. The teller of the story reports, within rigorous space limits, what is to him plain, moving, revealing. Every biographer of Lincoln is under compulsion to omit all or part of Lincoln's letters and speeches that he would like to include; this in part explains why any Lincoln biography is different from any or all other Lincoln biographies; each must choose and decide what sentences or paragraphs shed the light needed for the Lincoln portrait and story. Supposing all could be told, it would take a far longer time to tell it than was taken to enact it in life.

Should children write poetry? Yes, whenever they feel like it. If nothing else happens they will find it a training for writing and speaking in other fields of human work and play. No novelist has been a worse writer for having practiced at poetry. Many a playwright, historian, essayist, editorial writer, could have improved his form by experimenting with poetry.

To a man across a thousand years I offer a handshake. I say to him: Brother, make the story short, for the stretch of a thousand years is short.

Time is a great teacher.

I was proud of my mother. She had eagerness about books. She would have read many shelves of books if she could have found the time.

Young people will be the custodians of tomorrow. They will be held responsible for the continuance across the future of the "American Dream" that possessed Lincoln.

Whatever forms of control against future wars arise will depend on the will, the vision and human lights of those who run the controls. Any scheme of international order that looks good on paper will depend for its working well on the character and personality of the men entrusted to operate the scheme.

Some of my best poems, I think, now are aging in burnt wood. There also are some children's things—again, I think they're some of the best I've ever done.

When I was writing of Lincoln I determined that it would be a mistake to use any phrase that tended to draw the reader's mind back into the present. As an example, in one draft I described Cyrus McCormick of the McCormick reaper as the Henry Ford of his day.

As I look back I have regrets and wishes about my father. I regret that my father had a fear of want, a dread in his blood and brain that "the rainy day" might come and in fair weather he hadn't prepared for it. He aimed to be "a good provider." This fear, this dread, ran too deep in him. It was ingrained. The church was part of it, the economic system too. In present Sweden is no such fear and terror. "The workless," "the luckless," get a chance.

I feel younger than some of the younger generation.

I believe if a sermon gets printed it's more of a sermon than if it is just left in the ears of those who hear it.

Personality is the key. The men of grand personality were not afraid of loneliness. Every sublime creative artist and inventor has valued loneliness. Some philosopher long ago wrote it down that there were persons to whom nothing was more difficult than to sit in a quiet room alone.

There are men and women so lonely they believe God, too, is lonely.

Luck is a star. Money is a plaything. Time is a storyteller.

I read the papers a lot. I go with Robert Louis Stevenson who said that an intelligent reader with imagination can make an Iliad of a newspaper.

Long before these new educational mechanisms, these devices in the field of culture, there were men with sublime personalities, deep-rooted, that we love to contemplate. Not one of them ever saw a movie or heard a radio or watched a TV. Lincoln, Robert E. Lee, Jefferson, Leonardo, Shakespeare and many others, some of them hundreds of years ago. There were no signs of these modern mechanisms; but out of books and solitude they sank deep roots and effloresced.

The poets suspect that I may be a good biographer and the biographers believe that I may be a good poet.

Those verbs! They are terrible things. Nouns are definite, the names of persons or things, but verbs cause all the trouble in the world. All lawsuits are about something coming between two nouns—those verbs.

My granddaughter once said to me, "Is God real?" I said to her, "If God is real to you, then He is real."

Hope is an echo, hope ties itself yonder, yonder.

Man's life? A candle in the wind.

Three who come unbidden: love, jealousy, fear.

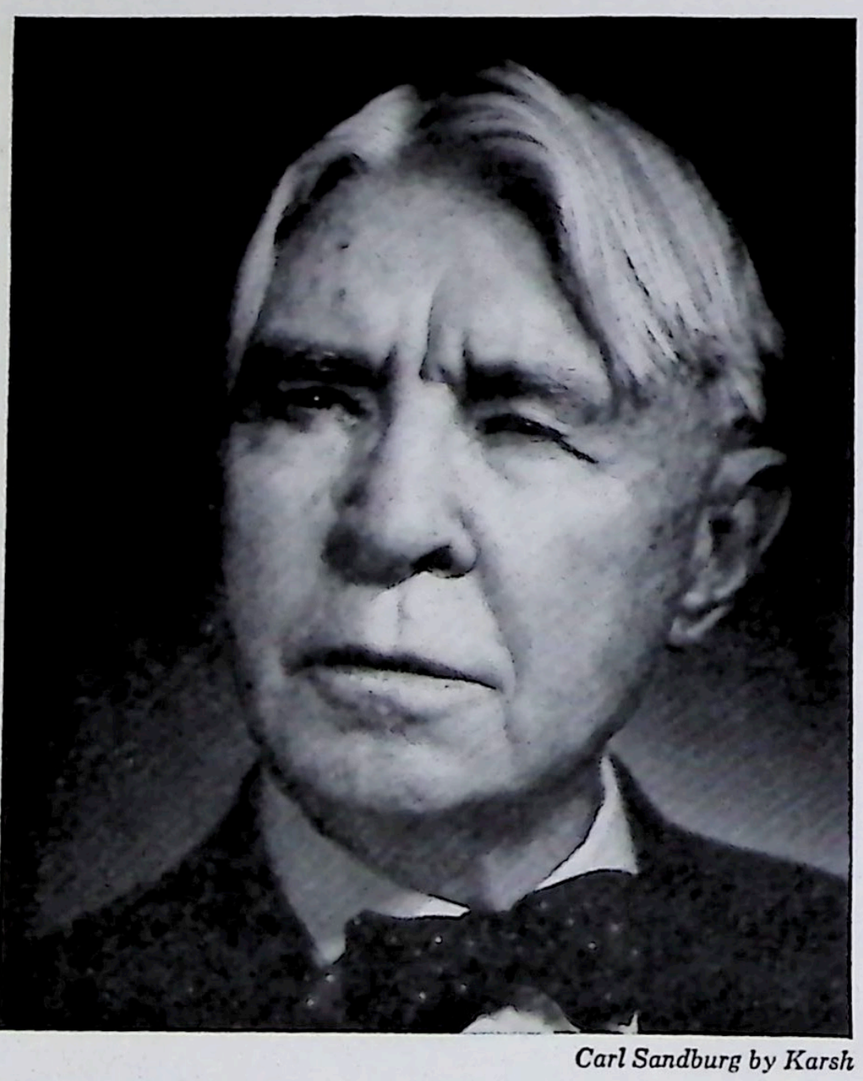
In all my writing I have followed almost a formula—that is, to write the books that I most wanted when I was a boy and that did not exist. That is not altogether true, but it is true of much of my work. . . . There is another need in me that does not go back to my childhood—a want to make full use of the American speech. There is not enough of it in poetry.

Look out how you use proud words. When you let proud words go, it is not easy to call them back.

Who could live without hope?

Three who have their own way: a mule, a pig, and a miser.

## from the Wisdom of CARL SANDBURG



*Carl Sandburg by Karsh*

To lose yourself in some character or intent. That is the way to work.

I write what I know on one side of the paper and what I don't know on the other.

Among the million words in the Lincoln utterance record, he interprets himself with a more keen precision than someone else offering to explain him. His simple opening of the House Divided speech in 1858 serves for today: "If we could first know where we are, and whither we are tending we could better judge what to do, and how to do it."

If people are going to write, whether it's good writing or stupid, they're going to write and nothing can be done about it. I know some people who can't write for sour apples but I tell them, "Go on with it. It can't hurt anything."

Our young people have entered the national scene and the world scene at an hour that is strange in world annals, in world history. Across the last fifty or sixty years there have been the most colossal, brutal, studied outrages that the human family has ever known, and at the same time, across that same period, there have been greater advances in transport and communication, preventive medicine and other fields, than in the previous five thousand years. And the men of science—I don't know—at the present hour I am inclined rather to trust them than the poets, as prophets, as foretellers about our future. They say that the next half century will be as daring and as original as the past fifty years. It might be that historians will record—for all of the gloom that we have sometimes in surveying certain situations—it may be recorded that we were the witnesses and the participants of the brightest era ever known to mankind.

I tell you the past is a bucket of ashes.

Arithmetic is where numbers fly like pigeons in and out of your head.

He who burns himself must sit on the blisters.

Knowledge—that is what counts when your children go out in the world—knowledge!

Money breeds money.

There are poets of the cloister and the quiet corner, of green fields and the earth serene in its changes. There are poets of streets and struggles, of dust and combat, of violence wanton or justified, of plain folk living close to a hard earth.

Poetry and politics, the relation of the poets to society, to democracy, to monarchy, to dictatorships—we have here a theme whose classic is yet to be written.

Slang is a language that rolls up its sleeves, spits on its hands and goes to work.

What the young people want and dream across the next hundred years will shape history more than any other motivation to be named.

Youth when lighted and alive and given a sporting chance is strong for struggle and not afraid of any toils or punishments or dangers or deaths.

What is instinct? What is thought? Where is the absolute line between these two? Nobody knows—as yet. What is an Emotion as apart from an Idea? When are a Concept and a Feeling identical? Nobody knows—exactly—as yet. What is an ideational state of mind as set off from a reverie? When do the foregoing seemingly contrasted urges of blood and brain move into a confluence with an end result of Creative Art? They're working on it. If or when they filch this secret from the broad bosom of Mother Nature they will have solved the mystery of what for long has been termed Genius.

The inexplicable is all around us. So is the incomprehensible. So is the unintelligible.

I still believe Longfellow was correct in writing "things are not what they seem."

Brunch is usually my first meal of the day. You know, when you're over 80, a day is an awful lot of time.

I've written some poetry I don't understand myself.

I have an eleventh commandment for all: "Thou shalt not commit nincompoopery!"

Lincoln's acts and utterances over fifty-six years of life are taken by many, the world over, as the best personal key to the mysteries of democracy and popular government. He is seen as a symbol of his nation being truly "the last best hope of earth." The marvelously mingled tragic and comic elements of his personality brought one comment: "Perhaps no other human clay-pot has held more laughter and tears."

I read things as a boy that had the mystery of sound and rhythm—Charles Dickens' *A Child's Dream of a Star,* and Thomas Gray's *Elegy in a Country Churchyard.* But I didn't write any as a boy. It's hard to say how I moved into what I wrote that I termed poetry. But there's still argument whether it is poetry or not.

Life without a friend is death without a witness.

Poetry is a sliver of the moon lost in the belly of a golden frog.

The greatest cunning is to have none at all.

With some paragraphs, you've never had more fun in your life. With some, you have to wrestle with yourself to get the words.

Dream with the dreamer his dreams. Some day we may weave them into realities, for much of life is of such stuff as dreamers are made of.

The professors created the atomic bomb, not the politicians. The politicians had nothing to do with developing atomic power. But it's the politician who is running around getting very dizzy over atomic power.

As years pass and experience writes new records in our mind life, we go back to some works of art we rejected in the early days and find values we missed. Work, love, laughter, pain, death, put impressions on us as time passes, and we brood over what has happened, praying it may be an "exalted brooding." Out of songs and scars and the mystery of personal development, we may get eyes that pick out intentions we had not seen before in people, in art, in books and poetry.

The chief influence on my poetry was Abraham Lincoln. I have him soaked in my blood and brain and bone. After that are the proverbs of all nations and the music of the Negro.

I have written by different methods and in a wide miscellany of moods and have seldom been afraid to travel in lands and seas where I met fresh scenes and new songs.

Ignoramuses were talking about Lincoln in a way that made me tired. The more I got to love the companionship of this man the farther I went in my job. *The War Years* will take the people a week to read. Some will be insulted. "This is a bale of hay," they will say, "we want a ham sandwich." Every now and then some pleasant human duffer will come up to me and say, "What would Lincoln do if he were here now?" I've written nearly two million words on the subject of Lincoln and they want me to give them a convenient little capsule, possibly requiring two swallows to get it down.

Leonardo da Vinci, William Shakespeare, John Milton . . . name them over . . . Ben Franklin, Thomas Jefferson, Abraham Lincoln—not one of them ever saw a movie, heard a radio broadcast, or saw TV, and yet out of the things at hand they developed personalities, characters—characters that today we regard as sublime, as worth going to for what they may give us by way of education. They had conversation, they had books.

Lincoln embodies the best of the American experiment more surely, more deeply than any other figure in our history. He's rooted more deeply in our tradition than any figure that can be named.

At what age should a child begin writing poetry? Any age. Poems are made of words and when a child is learning to talk, to shape words on its tongue, is a proper time for it to speak poetry—if it can.

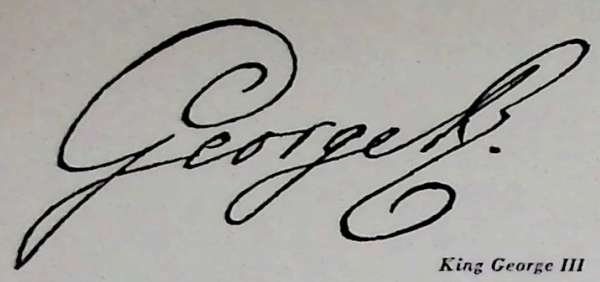
A poet explains for us what for him is poetry by what he presents to us in his poems. A painter makes definitions of what for him is art by the kind of paintings his brush puts on canvas. An actor defines dramatic art as best he can by the way he plays his parts. The playwright in his offering of dramatic action and lines tells us what he regards as theater art. And so on down the line. The novelist explains his theory of creative literature by the stories and people in his books. There is no escape. There stands the work of the man, the woman, who wrought it. We go to it, read it, look at it, perhaps go back to it many a time and it is for each of us what we make of it. The creator of it can say it means this or that—or it means for you whatever you take it to mean. He can say it happened, it came into being and it now exists apart from him and nothing can be done to it.

Freedom always has a cost and always goes straight back with inexorable connection to personal responsibility.

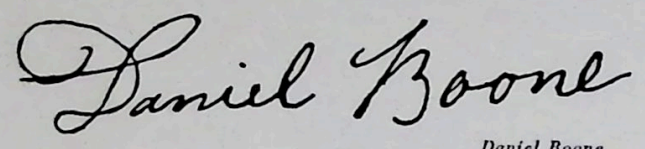
When you go through the speeches and letters of Lincoln you may find the word "responsibility" about as often as you find the word "freedom." He wanted freedom, for all men, everywhere. He has become a world figure, in a certain sense adopted by the whole Family of Man because of what he represented in the name of human freedom. And yet we will have to go far to find any human struggler so keenly and so sincerely weighted down by the burden of personal responsibility that he assumed on his own as a volunteer, as a citizen free and willing.

There are certain old poems . . . And we learn them by heart; we memorize their lines and outlines, and put them away in the attics of our memories, keeping them as keepsakes, taking them out and handling them, reciting their feel and rhythm, scanning their lines, and then putting them back till the next time they will be wanted, for they will always be wanted again.

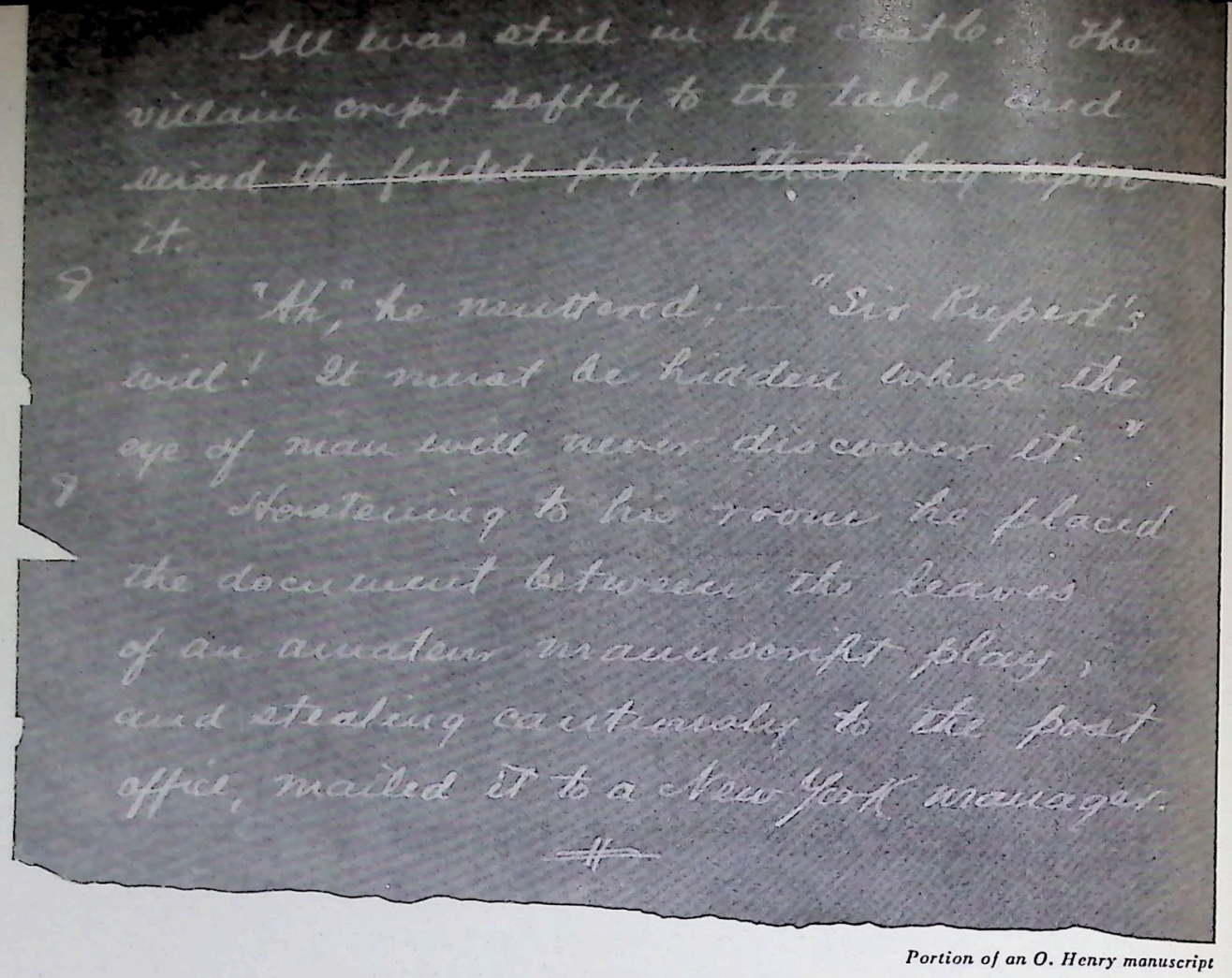
I tell you there is nothing in the world only an ocean of tomorrows, a sky of tomorrows.



King George III

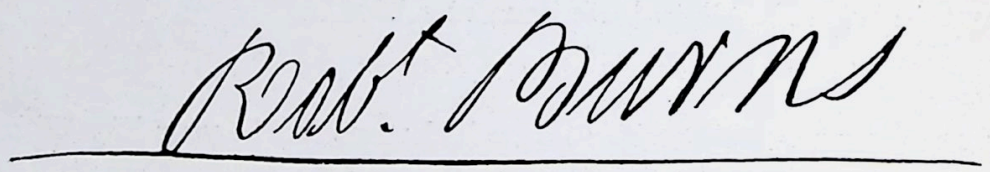


Daniel Boone

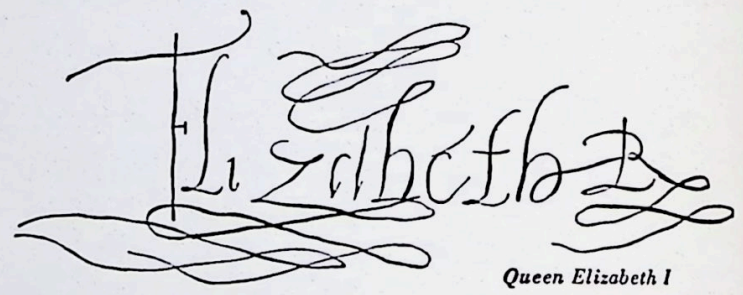


Portion of an O. Henry manuscript

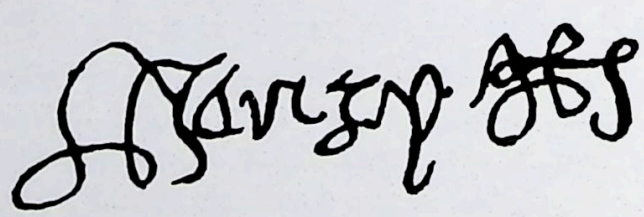
# HANDWRITING—clues to evaluating personality and character



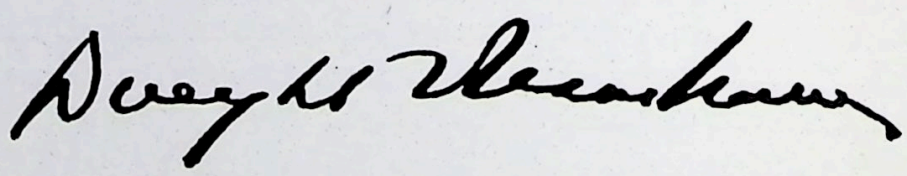
Robert Burns



Queen Elizabeth I



Henry VIII



Dwight D. Eisenhower

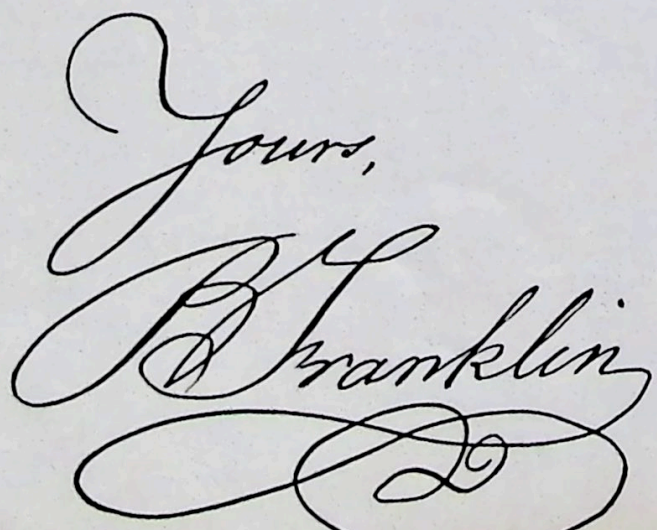
Philad.a July 5. 1775

Mr Strahan,

You are a Member of Parliament, and one of that Majority which has doomed my Country to Destruction. —You have begun to burn our Towns, and murder our People. —Look upon your Hands! —They are stained with the Blood of your Relations! —You and I were long Friends: —You are now my Enemy, —and

I am,

Yours,



Benjamin Franklin

HANDWRITING can be identified through the peculiarities which are typical of the individual writer. Writing is prepared by moving a pen or pencil across the paper in such a way as to form letters and words. With the unskilled writer or beginner this process requires concentration on each letter form and each stroke of the pen; but through training and use, the more skillful find much of the mechanical effort being performed subconsciously. Their main attention is directed toward the subject matter which is being prepared. With every person the writing movement, the manner of handling the writing instruments, the basic design of letters, and the mode of combining them into words become habitual. It is the combination of these individual pecularities repeated throughout a person's writing which identify his handwriting.

Even though each writer has definite individual habits, no two of his writing specimens are exactly alike. The pen or pencil is moved by direction of the mind and nervous system in combination with the shoulder, arm, hand, and finger muscles. This is not a precision mechanism like the printing press but instead produces writing which contains natural variations. The range and direction of these depend on the particular writer. This variation is, however, confined to the more superficial parts of the writing and does not mean that the fundamental habits, by which handwriting is identified, are changed with each writing effort.

History, though it does not throw complete light on the origin of writing, suffices to show certain stages in its progress, and upon these a classification has been founded, which is, however, incomplete and unsatisfactory. The simplest classification and perhaps at an initiatory stage the best, is that which divides all writing into ideographic and phonographic, or signs representing the things symbolized by words and signs representing sounds, that is, words themselves. Less satisfactory is the classification of writing into three historical stages, the figurative, the transitional or conventional, and the alphabetic. In the first of these, to which hieroglyphic writing belongs, writing is supposed to be pictorial or immediately representative of objects. After this, in the transitional period comes symbolical writing, in which abbreviated pictures are transformed into arbitrary symbols, first of things and afterward of sounds and words. Lastly, with the prevalence of phonetic writing sounds are represented first in syllables and afterward in letters. The course of writing is generally in the direction thus indicated, but it is inaccurate and misleading to represent these stages as epochs in its progress. As the most modern writing contains traces of the first of these methods, so the earliest contains traces of the last.

It is generally agreed that writing was introduced to the western nations by the Phœnicians, and it is commonly believed that the Phœnician system was based on the Egyptian. The Egyptians attributed their writing to Thoth, and the first characters are said to have consisted of portraits of the gods. Phœnician writing was anciently represented to have been brought by a Cadmean colony to Boeotia about the 16th century B.C.; and a certain number of the Greek letters are undoubtedly of Phœnician origin. The Greeks at first wrote from right to left, and afterward adopted the method called *boustrophedon,* from the motion of the ox in plowing, that is, alternatively from right to left, and from left to right. Writing from left to right was said to have been introduced in the time of Homer by Pronapides of Athens.

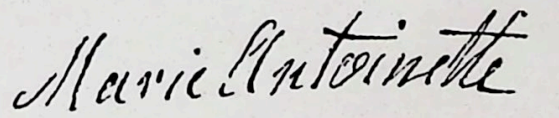
In the ancient Greek and Roman writing, and even for a time in the mediaeval writing of Europe, the words were not separated by space, and no punctuation marks were used. Capitals were not then used as now to distinguish prominent words, but whole manuscripts were written in large or small capitals.

The modern German alphabet was introduced in the 13th century. In England a variety of styles called Saxon prevailed in the early Middle Ages. An elegant mixed style was formed of a combination of Roman Lombardic and Saxon characters. The Norman style of writing came in with William the Conqueror. The Old English form of Gothic dates from the middle of the 14th century. The English "court hand," an adaptation of Saxon, prevailed from the 16th century to the reign of George II. In regard to the antiquity of writing in other parts of Europe, it was known to the Gauls before the time of Caesar; but no traces of the ancient writing remain, and whether it was derived from the Greeks or the Phœnicians is doubtful. ♦

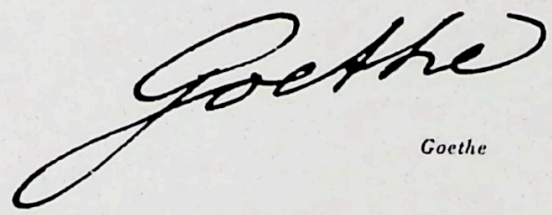
*from the Wisdom of Encyclopedia Americana*

[redacted]

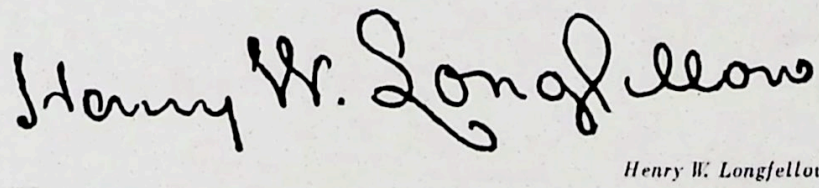
*Nathaniel Hawthorne*



*Marie Antoinette*

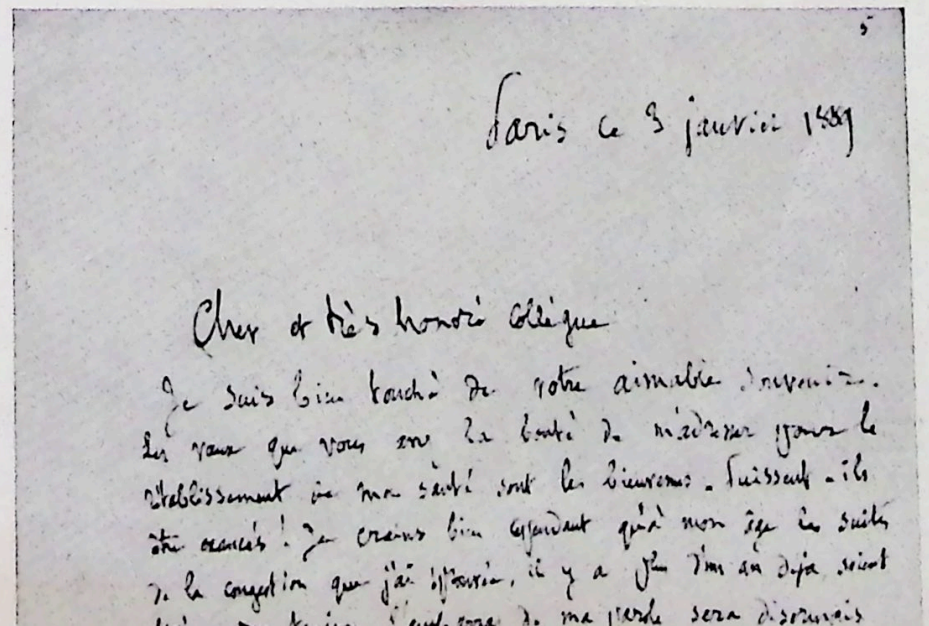


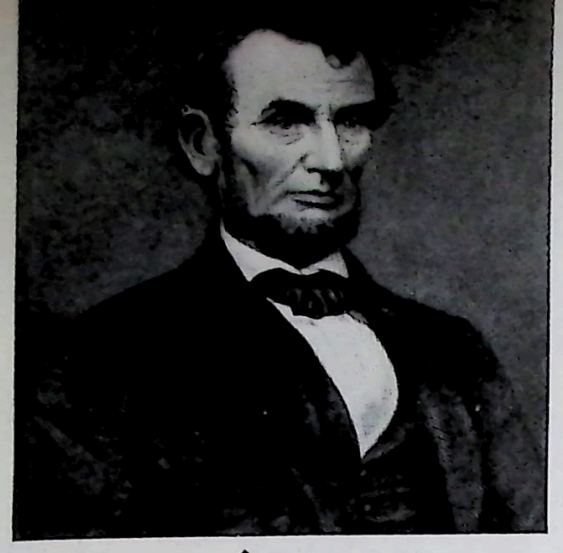
*Goethe*



*Henry W. Longfellow*

*Portion of letter from Louis Pasteur to Joseph Lister*



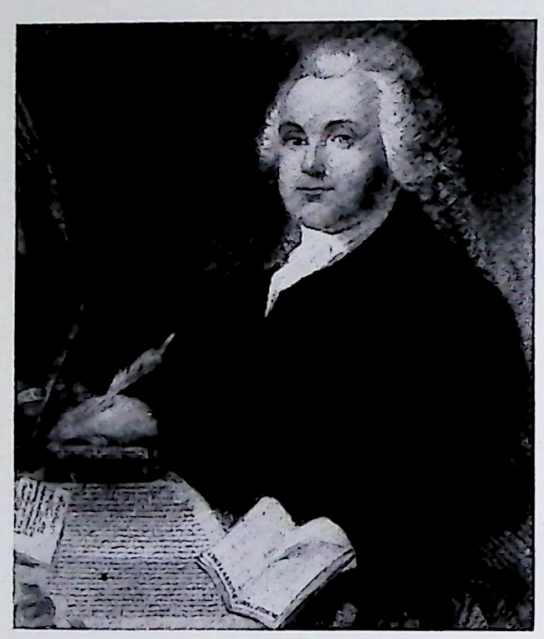


*Abraham Lincoln*

A. Lincoln

Th Jefferson

*Thomas Jefferson*



*Roger Williams*

Roger Williams

S. L. Clemens
Mark Twain

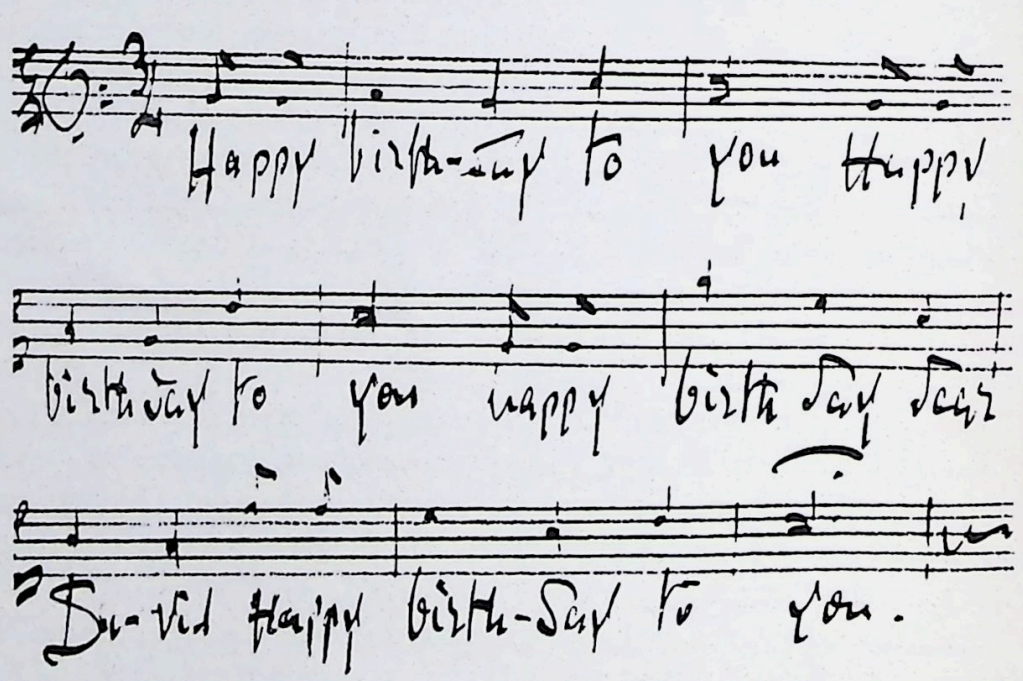
*Mark Twain*

Bonaparte

*Bonaparte*

Arnold J. Toynbee

*Arnold J. Toynbee*


February 27 - 1944
Happy birth-day to you Happy
birth-day to you happy birth-day dear
Da-vid happy birth-day to you.
with best wishes for many and
many happy returns of the day
from your affectionate friends
Carla and Arturo Toscanini

*Arturo Toscanini*

Carl Sandburg

*Carl Sandburg*

Your very sincere
P B Shelley

*Percy B. Shelley*

Albert Schweitzer

*Albert Schweitzer*

Franklin D. Roosevelt

*Franklin D. Roosevelt*

Eleanor Roosevelt

*Eleanor Roosevelt*

R W Emerson

*Ralph Waldo Emerson*

Edgar A Poe

*Edgar Allan Poe*

Walt Whitman

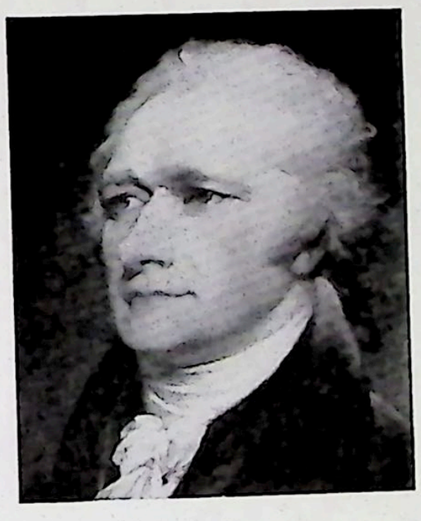
*Walt Whitman*

Joannes Miltonius:

*John Milton*

Sam: Johnson

*Samuel Johnson*



Alexander Hamilton

*Alexander Hamilton*

*Napoleon*

*Noah Webster*

Noah Webster.

*Woodrow Wilson*

Woodrow Wilson

*He who has health, has hope; and he who has hope, has everything.* — ARABIAN PROVERB

# FATIGUE

## why we get tired

*from the Wisdom of Encyclopedia Americana*

# FATIGUE

FATIGUE is a term applied to many different effects of activity but best regarded as a general category including all of the effects of activity which are adverse, which remain after the activity has ceased, and which are recoverable by rest. It is distinguished from more permanent effects such as loss of health, rapid ageing, or any damage which is irreversible.

The kinds of effect which have been called fatigue may be divided into five main classes: (1) feelings of weariness, tiredness, lassitude, and the experience of difficulty in continuing the activity (sometimes called psychological fatigue); (2) boredom or monotony; (3) reduction in the actual ability or capacity to continue the activity; (4) reduction in ability to perform tasks other than the one producing the fatigue (called transfer of fatigue); (5) a large number of specific physiological phenomena such as changes in cell composition of the blood, changes in circulation (for example, blood pressure or pulse rate), secretion of hormones by the endocrine glands, increases in oxygen consumption, chemical products of muscular contraction appearing in the blood stream, or changes in the supply of nutrients to the muscles.

During World War II, the term combat fatigue came into widespread use. This is to be distinguished from fatigue in the sense in which it is used here. Combat fatigue refers to a more permanent kind of emotional disturbance resulting from severe stress, such as prolonged infantry combat. It is an effect which varies markedly from person to person, and does not depend solely upon exposure to stress as such. While emotional factors are often more important than the other aspects of an activity in producing fatigue of the more familiar kind, the present discussion is limited to the relatively temporary effects, while those which belong to the realm of psychotherapy and mental health and are of a more enduring nature must be considered as problems of psychiatry and mental hygiene.

It was once believed that fatigue was a single entity or core of effects which caused all of the specific symptoms listed above. Present evidence, however, casts doubt upon this conception. The nature of the physiological changes varies from one kind of activity to another. Doing clerical work does not produce the same physiological changes as running a race. Even different kinds of muscular work produce different kinds of effect—that is, different kinds of fatigue. There are also other lines of evidence that fatigue is not a single phenomenon. Feelings of weariness fail to correlate with capacity for continuing the performance. The transfer of fatigue from one activity to another depends upon the degree of similarity of the two activities, indicating that the fatigue produced by one activity is not necessarily similar to that produced by another of a different kind.

The terms mental fatigue and physical fatigue, although commonly used, have little meaning in the study of the effects of activity, since they must all be regarded as having a basis in the physiological mechanisms of the body, either in the nervous system or elsewhere. The distinction between mental and physical activity is also meaningless, since thinking depends upon the nervous system and even the muscles and glands of the body. Even a classification that includes only such work as requires the exertion of physical force is of little value. A sprint and a day-long walk both involve the development of muscular force, yet the effects of the two tasks are quite different in pattern and detail.

Of the five classes of effect under the general heading of fatigue, the first has received the least attention in research studies, partly because of difficulty in quantifying the feelings of the individual. It can be argued, however, that these feelings are the most important aspects of fatigue from many points of view. To the individual it may be the most important cost of work and therefore may be weighted very heavily in evaluating his human efficiency. Psychologists are working on the problem of better methods of studying tiredness and weariness as an effect of work.

Boredom, or monotony, is independent of tiredness in that an individual will report that he is tired but not bored, bored but not tired, as well as both tired and bored. Considerable research has been carried out upon two problems of boredom: (1) what kinds of individuals are more susceptible to boredom, and (2) what kinds of work or working situations produce severe boredom. While it is still not known what personality traits make an individual susceptible to boredom in a particular kind of work, it appears to be related to such factors as his general interests, his personal adjustment, and his social relationships. The influence of personal motivation appears to be stronger in connection with boredom than it is for the four other aspects of fatigue.

As for the kind of work most likely to produce boredom, research suggests that it is a task which requires a certain amount of attention from time to time, but does not require the complete absorption of the individual. Tasks which are completely automatized and habitual appear to be less boring than those which require some attention.

Early studies of muscular fatigue by physiologists utilized isolated muscles taken from cold-blooded animals, or made use of human subjects who were motivated to perform at or near their peak capacity in lifting weights and other heavy muscular tasks. Under these conditions loss of capacity is clearly observable as the work continues. Under more normal conditions, such as those in factories or schools, the individual does not work at capacity and changes of this kind are not directly observable. Also tasks which do not require muscular force (for example, solving problems) do not show rapid or reliable reduction in performance, even when the subject is trying to work at capacity.

The transfer effect of fatigue has been utilized principally for the purpose of devising fatigue tests. Because of the difficulty of measuring loss of capacity in the task itself, it was thought possible to measure the effect of work by asking an individual to perform a special task before and after the work and measuring the change in his performance. The difficulty with this approach is that the effects of different kinds of activity require different kinds of measuring techniques. The visual strain due to fine inspection work and the fatigue resulting from a day of heavy muscular work must be expressed in entirely different terms and in units of measurement that do not lend themselves to accurate correlation. If there is a common basis for all fatigue, a fatigue test to measure it still remains to be found.

Bodily changes related to fatigue have been found in almost every physiological system. In work requiring the development of muscular force, energy-producing substances in the muscles, such as glycogen, are used up and this metabolic activity leaves various substances (for example, lactic acid) as waste products which may affect the muscle or be distributed through the blood stream to other parts of the body. Under normal conditions, however, the muscle is kept supplied with sufficient nutrient material and the waste products are reconverted to supply new energy so long as the blood supply of the muscle is intact. It is therefore unlikely that these chemical changes are of critical significance in normal fatigue, except possibly in very heavy muscular work. For normal kinds of sedentary work, chemical changes in the muscles play a minor part.

While there are undoubtedly changes in the central nervous system during fatigue, the nature of these changes is largely unknown. In severe muscular strain, such as lifting a heavy weight with a limited muscle group, there is evidence that the nervous system stops the muscular activity even before the muscle has lost the power to respond. It is possible that the neural impulses which activate the muscle are inhibited by the stimulation of pain receptors in the muscle which is being used.

There are also complex changes in the autonomic nervous system and the endocrine glands during activity, and these changes are probably also involved in fatigue. ♦

*In the gourmet era of the Roman Empire, banquet guests were served exotic foods and wines brought from all parts of the world, were presented with silver flagons, and crowned with golden wreaths. Perfumes were poured from golden vases, musicians played, women danced, and entertainers performed feats of skill and daring. In today's fine restaurants everyone can enjoy a far greater variety of delicacies from all over the world especially prepared to individual tastes by master chefs, and in more opulent surroundings than in the early days of the Romans. The authentic English-Tudor decor of the Beefeater Inn, Beverly Hills, California, for example, has made it nationally famous as a unique restaurant which attracts America's gourmets who appreciate superb food and drink, skillfully prepared and luxuriously served, in unusual atmosphere of gracious elegance.*

*An Introduction to*

# FOOD FEASTING AND FESTIVITY

*from the Wisdom of Encyclopedia Americana*

In many religions the gods are thought of as feasting, and mortals who have died worthily are rewarded with celestial banqueting. Thus the Norse heroes, after death, feast at Valhalla; and in the Moslem paradise the faithful are confronted with 300 attendants each at table, every attendant setting down a golden dish of food. No two contain the same food, such is the abundance and variety.

Among religious feasts those in honor of the dead appear to have taken place in most civilizations at some time in their history. Those who sent the deceased to the other world with his tools and weapons, his clothes and his vessels, could only assure him nourishment by seasonal sacrifices. And it was natural that these sacrifices of food and drink should be accompanied by banquets, at which his friends entered into communion with him.

The *agape*, or love feast, of the early Christians was closely related to the funeral feasts of the Graeco-Roman world. The Christian *collegia* whose members joined for this purpose seem at an early, but undetermined, period to have adapted the Lord's Supper to the commemoration of their own deceased colleagues. It is clear that the supper described by St. Paul was a real meal. Similar banquets are found in Brahman practice, which includes the offering of sacrificial feasts for the benefit of the deceased ancestors.

The actual procedure at banquets has been described at different times and in many civilizations. At Egyptian feasts guests sat on the floor and skeletons were exhibited as a reminder of mortality. The Assyrians reclined at their banquets on couches covered with flower petals. Ashurbanipal, king of Assyria, once gave a feast which lasted for seven days and seven nights. According to the book of Esther, the Persian king Ahasuerus gave a feast to his princes and nobles which lasted 180 days, culminating in a further feast which lasted a week, for the benefit of the populace in general. The decorations and furniture are described, including the beds on which the guests reclined. A special point is made of the fact that nobody was compelled to drink more than he felt inclined to.

With the Jews the ceremonial washing of feet on the arrival of guests was an important item. Like the Hindus to this day, the Jews made ceremonial handwashing a point of doctrine before sitting down to a meal, so that any Jewish banquet would have included this ritual.

Banqueting seems to have been mainly a male business among the ancients, though Ahasuerus is represented as sending for his queen to appear at the end of his incredible feast, when he was "merry." In similar circumstances the daughter of Herodias danced before Herod and his "lords, high captains and chief estates" at a birthday banquet. Among the Greeks a similar tradition obtained originally; but according to Athenaeus, the philosopher of the kitchen and the table who lived in the 3d century A.D., the interest taken in banquets by the *gynaeconomists* (Athenian magistrates whose function it was to maintain manners among women), indicates the extent to which the rule was varied.

Real luxury at the Grecian table appeared toward the end of the 6th century B.C., a result of Oriental influences. It was from that time that the custom began of reclining on couches at meals, resting upon the left elbow. *The Frogs* of Aristophanes, in its account of the banquet given by Persephone in honor of Hercules, lists an elegant menu which may well have been typical of festive fare after 520 B.C., and the procedure is also on record. Guests bathed and perfumed themselves before going to the houses of their hosts, where slaves washed their feet on arrival. Couches were arranged in a row or in a horseshoe formation; and here the guests took their places, washing their hands in basins brought by slaves. Spoons were provided, supplemented by the use of fingers and bread. When the meal was over there was more handwashing, the attendants crowning the guests with wreaths of flowers.

Before the tables were removed and fresh tables brought with dessert (such as fruit, cheese, and cakes), there would be a libation to whatever gods it seemed necessary to propitiate. The luxuries of the table in the 5th century B.C. were graphically described by the poet Philoxenus, the Leucadian, that notorious gourmand who is alleged to have gargled with hot water so as to accustom his throat to hot food.

The hedonism of Sybaris was proverbial, and it was here, and in Sicily, that luxurious tastes encouraged the pioneers of gastronomy. Of the Hellenic city-states, Athens followed later and Sparta last. Fourth-century Greece developed the dessert into a second banquet. A good cook now fetched a high price—the more so as he was supposed to be something of a poet, a philosopher, a scholar, a psychologist, a connoisseur of music and a dietician, if not something of a doctor.

Rome learned from Greece what Greece had acquired from the East; and the frugal habits of the ancient republic were rapidly changed by the process of conquest. Even the Roman generals were often famous gourmets; and Lucullus, in his eastern campaigns of the 1st century B.C., was concerned to bring cherries from Pontus to plant in his own garden. Sumptuary laws were passed in vain efforts to restrain the growing extravagance of Roman entertainment. The general program closely resembled that of Greece, but a *gustatio* (hors d'oeuvre) was commonly served and, like the dessert in Greece, the *gustatio* was likely to become a meal in itself.

The real repast followed, and not until this was over and the dessert had been served would wine normally be drunk. Drinking was highly formalized and directed by a *magister*, at whose orders the drinking vessels were filled and refilled. Guests also drank to order and etiquette demanded that they should empty the vessel at one draught.

Tastes in imperial Rome became increasingly fantastic from the time of the notorious glutton and spendthrift, Marcus Gavius Apicius, whose books on cookery give some idea of Roman fare at its best. But Roman taste was vitiated by the belief that the most expensive food and drink must necessarily be the best. Hence we find the Emperor Caligula (in imitation of Cleopatra) throwing pearls into vinegar to make a costly, but hardly palatable, drink. It was, for the same reason, more fashionable to eat peacocks than common poultry; and the tongue of the nightingale was fancied as having, presumably, a flavor no less mellifluous than the note of the living bird.

The extravagances of Nero, Vitellius, and Heliogabalus have become proverbial, but must have been out of all proportion to any real increase in gastronomic value and often quite revolting. The extensive use of spices in Greco-Roman "luxuries" may well have been due to the actual inferiority of the viands, partly on account of these false standards. But Roman taste is hard for any modern palate to appreciate. The appetizer used before a feast is in itself inexplicable—a concoction of wine, pepper, gum, spikenard, saffron, and dried dates, heavily sweetened with honey. The same may be said for *garum*, the Roman sauce, of which the chief ingredients were the putrefied intestines of fish, with wine and the inevitable spices.

Equally strange was the taste for disguising a thing as something other than itself. It is possible to guess the reason for such disguises being apparently so easy in those days. Since no Roman gourmet ever really tasted his food, so much use being made of sauce and spice, it would not have been difficult to disguise a vegetable as a fish (an accomplishment attributed to one of the master cooks of antiquity) in the fullest confidence that the taste of either would, in any case, be smothered.

Much of our knowledge of the gourmet world of the Roman Empire comes to us through the *Deipnosophistae* of Athenaeus. From Athenaeus we have accounts of famous classical banquets, such as that at the wedding of Caranus, a Macedonian. Each guest, on arrival, was presented with a silver flagon and crowned with a golden wreath. Perfumes were produced in golden vases, musicians played, women sang, and other women (presumably conjurors) breathed fire and performed feats of skill and daring. The banquet ended with dessert, delivered in ivory baskets.

Menus of such banquets are too numerous, too long, and too tedious to record here in detail. Those cited by Athenaeus read like catalogues of all known fish, flesh, fowls, fruits, vegetables, wines, and spices, with confections made from the most incongruous ingredients. Aesopus Clodius, another exponent of pearls for internal consumption, devised a pie, using only birds which could imitate the human voice. Among such curious delicacies it is odd to find that the most relished flesh among the Romans was that of the dormouse.

The emperors led the fashion in prolonged feasts. Tiberius presided over a continuous banquet which lasted 36 hours; and Geta, the short-lived brother of Caracalla, is said to have arranged his menu alphabetically on one occasion, with so many courses that it took him three days to reach the end of it.

Forks were evidently not used at the Roman table, but toothpicks would be provided for each guest. Hand-washing was accomplished by running water (poured from the *gutturnium*, a vessel with a narrow opening).

The ancient world had its precautions. Aristophanes mentions the profession of taster, and professional tasters—also, it appears, professional parasites or diners-out—were united in "colleges." But by medieval times this function of tasting had acquired an elaborate ritual of its own. In certain households every article brought to the table had to be tasted in the presence of the "Taker of the Assay." Though this was common practice at all times in the houses of the great, it must have added greatly to the pomp and circumstance of banqueting.

Even the water in which the prince, duke, or earl was to wash had to be tested, the server first drinking some of it. Knives, spoons, and even napkins were kissed by servants with the same object of proving their innocuous character, the laying of the table and "assaying" of victuals being accompanied, in the houses of royalty, by "flourishes" of morsels to be tested and by much bowing and many genuflections. The "grand assay" at the table was accomplished "after the old custom, in singing of some proper or godly carol." Entremets were another typical medieval feature—interludes between courses, consisting of pageantry, singing, and jugglery.

At royal banquets (and certain others) the consumption of swan's flesh was often recorded. Peacocks, too, are found once more at the 15th-century table, 104 of them being served in all their feathers (replaced after roasting the body) at the installation of George Neville as archbishop of York, in the year 1466. At this feast 3,500 persons took days to allay their hunger and thirst.

A medieval banquet began with the sounding of a horn or trumpet. *Corner l'eau* was to call guests to wash, as all was ready—a custom which disappeared after the 15th century. At table the water was taken to the host and guests in order of rank. Ornamental basins of gold might be used, with perfumed water. One could confer a great honor upon a social inferior by offering to wash with him.

By the time of Elizabeth many new luxuries are available, as a result of discovery and trade—notably sugar, that "puts honey out of countenance." William Harrison, author of *Description of England* (1577), now speaks of strange novelties within his memory, such as *suckets* (preserved fruits) and *codiniacs* (marmalades of quince and honey). The potato has arrived and other plants hitherto unknown in Europe. And all such things, together with marchpane and jellies in curious shapes, are listed as present at the "ordinary or voluntary feasts" of English merchants.

Shakespeare gives many glimpses of contemporary practices, such as the masked feast of Capulet in *Romeo and Juliet*. The cooks of the nobility, says Harrison, "are for the most part musical-headed Frenchmen and strangers." He also draws attention to the careful order in which different foods are served, showing that there had been considerable improvement since the amazing mixed "courses" of which one medieval example has already been given.

Muscovite customs in the 16th century are worth mentioning. English travelers spoke of the gold plate used on the czar's table and of goblets valued at an average of £400 sterling each. Ivan the Terrible himself sat at a massive golden table. Of gold and silver were the dishes, but the guests were not provided with knives, plates, or napkins. A Russian at that time carried his own knife and spoon in his belt. Gowns of gold brocade and mantles trimmed with ermine were provided for the guests at Ivan's table. The ceremonial included an elaborate formality of sending food personally to each guest with a personal message from Ivan, to which a personal reply was made. Guests at his banquets had to be prepared for five or six hours at the table. It is also of some interest that jesters, rapidly disappearing from European courts, still occupied a big place at such occasions in Russia and continued to do so until the mid-18th century.

Among the ironies of banqueting is the fish banquet given by the city of Paris in 1571 to Queen Elizabeth of Austria. It was a lavish affair and must have been very costly, but meat was excluded as the day was Good Friday. France, at that time, had learned a great deal about gastronomy from the Italian cooks brought to Paris by Catherine de Medici. The influence of France, in turn, upon England has already been noted.

The use of the fork had made a false start in Venice, in the 11th century, when a Byzantine princess, having married the doge, brought a fork with her and created a great scandal that brought upon her the maledictions of the clergy. But it was at Venice, some 500 years later, that Henry III of France noticed this strange instrument and it was soon taken up by the "mignons" (favorites) of the French court. Progress was slow. Whatever Queen Elizabeth used her three forks for (two of them garnished with gems), she certainly used her fingers at table for most purposes. Table forks, introduced into England by the English traveler Thomas Coryate, who found them used in Italian society, only became Anglicized in the 17th century after violent attacks on their use, including a denunciation from the pulpit.

Ben Jonson had foreseen that "The laudable use of forks brought into custom here as they are in Italy" would cause "the sparing of napkins." This proved so true that the table napkin, for a long while, ceased to be an article of use and became one primarily of ornament. At a banquet in the time of Charles II the napkins would appear ingeniously folded to represent birds, animals, and other objects; and they probably remained unfolded. It has been suggested that the use of forks was encouraged by the fashion of wearing ruffs, in the time of Elizabeth and James I, as the possibility of soiling a ruff was considerable if fingers were used with greasy food.

The Stuart Restoration in England brought with it an age of extravagant tastes in everything, including food. The English, large eaters though they were, showed astonishment at the appetites of Peter the Great and his Russian companions when they visited England in 1698.

The rise of the middle class had an interesting effect on culinary standards. From the days of the great epicures, whose feasts were recorded in Captain Rees Howell Gronow's reminiscences (1861–1866), the kitchen and table gradually adapted themselves to these standards; and the cult of the "wholesome" largely rejected the French cuisine together with French morals and French politics, both highly suspect in the 19th century.

By the beginning of the 20th century the practice of banqueting had become so formalized that little more remains to be said of it. ♦

*Thinking, planning, creativity, imagination and money are the ingredients that go into the preparation, cooking and serving of the world's finest foods and drinks at America's great restaurants. Shown here, personally approving a dinner for guests dining at the Beefeater Inn, Beverly Hills, California, are three famed master minds of the culinary art, Restaurateur Albert Gordon, Maitre de Rudy Collins, and Chef Marvin Ward.*

*Violin virtuoso Joseph Szigeti.*

# GENIUS

*from the Wisdom of Encyclopedia Americana*

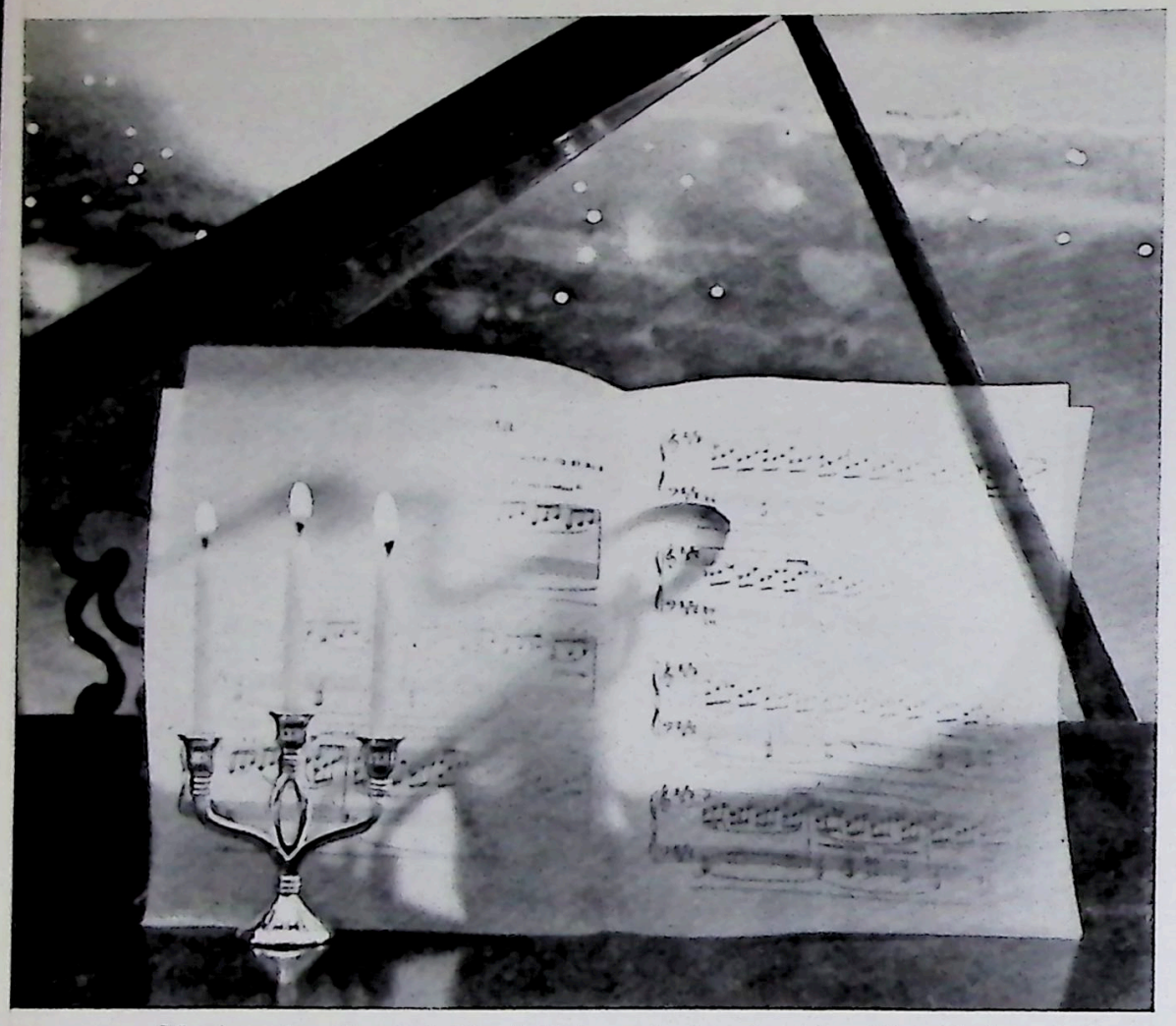
*All good things which exist are the fruits of originality.*— VOLTAIRE

IN ANCIENT Roman religion, the genius was the protective spirit which inhabits all living things. By the time of Augustus, the genius was defined as the guardian spirit of man. Each Roman male was thought to have his own *genius tutelae*. Each woman was believed to have a similar guardian, known as the *juno*. The genius and the juno accompanied the individual throughout life, and, in anticipation of the Christian doctrine of personal immortality, they were considered to maintain their separate identities throughout eternity. There was also a national genius, whose statue was placed in the vicinity of the Roman Forum and whose likeness is often seen on coins dating from the times of Hadrian and Trajan. The Romans came to believe, as well, in the existence of evil genii, who seem to have been little different from the good genii except in their intentions toward the person to whom each attached himself. The term evil genius has survived into modern times, being applied to a person who exercises an unhealthy influence over the behavior or character of another.

In its most familiar contemporary sense, the term genius denotes a person who is endowed with unusual ability in creative endeavor, or who far excels average individuals in many fields of accomplishment. This application clearly stems from the ancient meaning of the word, and it is interesting to note that some trace of the old connotation has persisted throughout the centuries. The genius was long considered by many to be gifted with supernormal powers. To people of this persuasion it becomes impossible, by definition, to understand the nature of genius. It is something inexplicable, to excite wonder and admiration but never to be comprehended. Contrasting with this view of genius is that attributed to Aristotle by Seneca: "There is no great genius without a mixture of madness." Since mental disorders were regarded with superstitious fear and awe for centuries, it is not difficult to understand why many writers have regarded the genius and the psychotic as being somewhat alike.

The distinguished Italian criminologist Cesare Lombroso wrote that genius is a morbid condition resembling many forms of mental disorders and not unlike the personality makeup of the criminal. Sigmund Freud pointed out that the genius might be regarded as definitely neurotic or psychotic if he were unable to express his profound conflicts in sublimated form, as in a work of art or any other form of creative endeavor. Some writers have stated the opinion that the genius is foredoomed to a life of frustration; hence, neuroses and psychoses may be precipitated as a result. Others point out the high incidence of maladjustments, alcoholism, drug addiction, and grave mental disorders among geniuses as evidence that biological determinants, not environmental frustrations, are basic in the genius.

Sir Francis Galton, having rejected prevalent theories and fantastic speculations about genius, published an important series of books between 1869 and 1889 dealing with his investigations. Studies of the family histories of persons who had achieved high eminence through their own abilities, not through the accident of birth, convinced him that genius is inherited. In 1884 he announced his coinage of a new word, "eugenics," to designate a projected program which was to encourage marriages among the brightest men and women and, by corollary, to discourage childbearing among the dull and the pathological. Though his opinions were based upon humanitarian considerations and derived from research, his conclusions were not essentially different from those of Frederick Nietzsche, who introduced the concept of the "superman." They both agreed that genius is determined by heredity and that environmental opportunity has nothing to do with its formation. ♦



*Music wakes the soul, lifts it high, and wings it with sublime desires.*—ADDISON

# ENJOYING THE BEAUTY OF MUSIC

MUSIC APPRECIATION is a term that has acquired a definite meaning in the United States, and to some extent abroad, particularly in schools and colleges where music is taught. In contrast to the study of musical performance or composition, or even to such subjects as theory, harmony, or musical history, it refers to the enjoyment and possibly the understanding of music by the average listener, who may be completely lacking in technical training or experience.

Music appreciation is, therefore, a subject open to the entire student body of any educational institution, or to the layman in general, adaptable to any curriculum, and within the pedagogic grasp of anyone possessing the necessary enthusiasm and equipment. But the term is still open to a variety of interpretations, and the title is likely to create suspicion in educational circles where the tradition persists that mental discipline of any kind cannot possibly be, and ethically should not be, enjoyable.

Consequently, one hesitates to substitute the word "enjoyment" for "appreciation," although it expresses far better the object of any such activity in the school or the home. "Understanding" is too ambitious a word, for even a highly educated musical scholar would hesitate to apply it to his own achievements. A vast knowledge of technique and history does not necessarily provide an answer to the eternal question of aesthetics: "What is beauty and how is it attained?" The indefinable quality known as inspiration or genius cannot be caught by a formula or reduced to a mathematical equation.

Music is practically unique in the fact that anyone can enjoy it, without the slightest knowledge or conception of its principles, and that increasing knowledge does not necessarily mean greater enjoyment, although it is fair to assume that it does. Music suffers from the snobbery of the self-sufficient souls to whom it is all an open book, and who resent the suggestion that anyone should be told what to like or why; and from that of the equally self-sufficient ignoramus who boasts that he knows nothing about art but knows what he likes. Strictly speaking, everybody can enjoy music, particularly in its simpler and more obvious forms, without being told how or why. But that instinctive enjoyment which has been called "the common sense of music" (literally the sense of music common to all human beings) can be developed into an actual art by the simple process of creative listening, plus perhaps a certain amount of participation where the spirit is willing and the flesh not too weak.

At least it is agreed today that music appreciation in the best sense of the term has little or nothing to do with history, technical details—including a memory for opus numbers and key signatures—or the ability to pronounce foreign words or names correctly. Such information can be found easily in various books of reference, and even the critics and scholars of music (sometimes there is a distinction) would not dream of trying to carry it all in their heads when it is such a simple matter to look it up as needed.

The pursuit or study of music appreciation must be considered in the long run the acquisition of listening habits, just as the practice of athletics generally has as its ultimate object the permanent possession of physical habits. Music teachers may well take a lesson from athletic coaches in this respect, for they are still too often obsessed with the professional tradition, convinced that music is worth pursuing only for the sake of sensational and perhaps lucrative performance. The athletic coach knows perfectly well that only one in thousands of his pupils is likely to become a professional, and his entire effort is based on amateur standards, as that of most music teachers should be.

The errors made by teachers of music appreciation have been owing largely to their inability to put themselves in the place of their pupils.

They fail to realize that to the novice all such technical details as notes, bars, staves, and acoustics mean absolutely nothing, and they seem unable either to approach the subject as a whole, from the standpoint of the inexperienced listener, or to cover one point at a time, disregarding the exceptions and explanations which to them are of vital importance but again mean nothing to the layman. Of all subjects, music has been most handicapped by the refusal of its practitioners and teachers to apply the fundamental rule of all pedagogy: work always from the known to the unknown, from the familiar to the unfamiliar.

The tragic joke of this situation, which lies at the bottom of a musical illiteracy that is still appalling, in spite of the best efforts of radio, phonograph, movies, schools, churches, and private teachers to eradicate it, is that music offers more familiar landmarks, more obvious points of departure, than any other art, and perhaps any other subject, in the educational curriculum. Everyone has an instinctive sense of rhythm, keeping time when the band goes by or the orchestra strikes up a good fox trot, regardless of training or past experience. Everyone can recognize a melody after a few hearings, and everyone responds favorably to certain combinations that represent harmony rather than discord and to certain qualities of tone that are universally accepted as pleasing. The only problem of music appreciation, therefore, is to guide these natural instincts in the direction of established standards of beauty, and perhaps to organize them to the extent of permitting an honest appraisal of unfamiliar material, in line with the best judgment of the past, present, and future.

Music may mean anything from the current popular tune to a Brahms symphony, depending largely on the individual concerned; and while certain matters of taste have been well established and generally accepted, no one living is actually qualified to say didactically "This is good and this is not." If music lovers and critics are completely honest, they must admit that their enthusiasms, as well as their hostilities, represent primarily a personal preference or prejudice, and that they have no right to impose these on their fellowmen. Time alone can decide what is good music, and it may even be argued that no music can be considered completely bad if it has achieved some degree of permanence. Even though the sensitive pioneers of beauty may arrive intuitively at certain convictions which eventually prove correct, the test of time provides the only real and final answer. Folk music inexorably follows the law of the survival of the fittest; and the much abused word "classic" actually applies to any work of art that is recognized as permanent.

The layman wishing to develop an appreciation of music must, therefore, be content to discover and analyze those qualities and characteristics that appear in compositions of lasting quality, seeking to draw from them conclusions of wide and perhaps universal significance. To this extent it is possible to strengthen and justify an enthusiasm which is fundamentally direct and spontaneous. The unaffected conviction of beauty in any form is something not to be supplied by textbooks or teachers; and no matter how helpful such guidance may prove, those who enjoy or appreciate music must be permitted the feeling of having made this discovery for themselves. So the problem narrows down to the stimulation, encouragement, and analysis of what is actually a normal response to beauty in the universally appealing form of music.

The simplest and most comprehensive definition of music constitutes the basis of *The Art of Enjoying Music* by Sigmund Spaeth. This definition, the result of much experience and many experiments with listeners of all sorts, is: "Music is the Organization of Sound toward Beauty."

There are three important words in this definition: *organization, sound, beauty*. Sound without organization is mere noise. There is a rule of physics that regular vibration produces musical tone and irregular vibration produces noise. Therefore, the simplest form of organization of sound toward beauty is regular vibration.

But assuming various possible combinations of musical tones in time, there are many ways of organizing these raw materials in the direction of beauty. (It should be noted that the definition says "*toward* beauty" not necessarily "*to* beauty."

The most primitive organizing factor in music is *rhythm*. This one word covers all the phases of the time element—pulsation, measure, and the organized grouping of accented and unaccented tones. The Italian word *tempo* strictly refers only to the speed at which a composition is played or sung, and this term has become common in English, particularly in relation to the stage and the motion pictures.

Our word *time* has a broader significance. It refers first of all to the fundamental beat of music, which runs always in twos or threes. Roughly speaking, all music can be divided into march time and waltz time (duple and triple). The fundamental twos and threes may be doubled or even tripled (in various forms of "compound time") but the basic beat remains constant. Even the supposedly irregular 5-4 time is merely the alternation of twos and threes.

Over this fundamental beat of time, represented familiarly by the action of the human heart, the regularity of breathing, the rhythm of sustained walking or running, the tides, the ticking of a clock, and the whole organization of the universe, music presents always a definite pattern of long and short notes, accented or unaccented. This free pattern of time may be called rhythm in the strictest sense of the word. A dancer or an orchestral conductor keeps time to the fundamental beat, in twos or threes, but follows or suggests also the broader rhythmic line, with its accents, its pauses or rests, its retarding or accelerating of tempo.

Rhythm, or time in its broadest sense is the first element in music discovered by mankind, whether it be the savage, the child or the inexperienced, civilized adult. It elicits primarily a physical response, perhaps almost a reflex action. It is no exaggeration to say that most people listen to music with their feet, and many of them never get beyond that stage.

Patterns of rhythm have the unique quality of repeating themselves endlessly, but with endlessly varying effects, depending on how they are filled out with melody and harmony. An amusing game can be played by tapping out the rhythmic pattern of a tune and asking someone to guess the melody. It is surprising how often the guesser will arrive at an entirely different piece of music, but fitting identically the same rhythmic pattern.

*Melody* is the second and perhaps the most important organizing factor in music. It is the memory element, for people instinctively remember a piece of music by its tune. (Gen. U. S. Grant is quoted as saying that he knew only two tunes. One was *Yankee Doodle* and the other was not.)

Theodore Thomas used to say "Popular music is familiar music" and he was right. The only problem of making good music popular is that of making it familiar. Therefore, it is fair to state that recognition is the first step toward appreciation. An audience recognizing the first few measures of a familiar encore often breaks into applause. The listeners are not applauding the music or the performer. They are applauding themselves because they recognized it. That is an encouraging sign of human interest in a concert program.

Patterns of melody may consist of only a few notes, and again the possible variations are endless. There are only 12 different notes in the chromatic scale between one tone and its octave, but mathematicians find nearly 500 million permutations and combinations of these 12 notes. Yet the materials of melody are sufficiently limited to cause the recurrence of recognizable patterns, just as bridge hands will often show a general arrangement of cards that has often appeared before. When a composer is consciously trying to stimulate the memory of his hearers, as is always the case with a popular tune, he almost inevitably falls into reminiscent patterns, and these parallels have often led to accusations of plagiarism and bitter arguments in the courts of law. The answer generally is that the similarities are entirely accidental, and that the supposed thief might as easily have taken his melodic line from a dozen different sources.

Patterns of melody lead logically to patterns of *harmony*, and this is the third step in the organization of sound toward beauty. Tones that sound pleasing in a melodic line, representing various levels of pitch, may also be played or sung simultaneously, with even more pleasing effect if they produce what is known as harmony. The traditions of harmony are very strict and limited, while the modern attitude is just as extreme in the other direction. Somewhere between the limits of dissonance and the platitudinous monotony of the commonest chords lies a happy medium that satisfies and stimulates the novice even though it will not necessarily bore the sophisticate.

The subject of harmony has been irreparably buried under a mass of technical detail, most of which has been enthusiastically discarded by contemporary composers. By common consent, the laws of harmony exist

*In learning music hearts learn to love.*—RICARD

*Music, of all the liberal arts, has the greatest influence over the passions.*—NAPOLEON

*All musical people seem to be happy; it is to them the engrossing pursuit; almost the only innocent and unpunished passion.*—SMITH

*Music resembles poetry; in each art numerous graces which no methods teach, and which a master hand alone can reach.*—POPE

only to be broken. Therefore, it is absurd to saddle the layman with a load of outworn rules and formulas which have little or no significance today.

Anyone, however, can learn to recognize such conventional chords as those of the tonic (based on the key-note), dominant (on the fifth interval of the scale) and subdominant (on the fourth). These chords have become most familiar through their use in the various Amens at the close of hymn tunes. The average ear can also distinguish between major and minor harmonies, the technical difference of which lies in the mere lowering of the third interval by half a tone. Anyone who has ever sung in a barber shop quartet must have acquired a certain feeling for the fundamentals of harmony, no matter how crudely expressed, and this unique diversion is actually a phase of American folk music.

After the discovery of rhythm, melody, and harmony, the human ear becomes aware of *tone color*, or quality (known also by the French word *timbre*). This is an important factor in music, particularly of the modern type, where instrumental and vocal coloring have often been made to atone for a lack of melodic originality or inspiration. Every musical instrument, including the human voice, has an individual color or quality which can be recognized by any listener. A violin is as different from a cello as a soprano is from a baritone. There is no mistaking the difference between a flute tone and that of a trumpet or trombone, and this variety of color can eventually be detected even in closely related instruments like the oboe and English horn, or the clarinet and the saxophone.

When instruments or voices are heard in combination, the resulting tone color is all the more interesting and sometimes quite complicated. Those who enjoy music can find endless fascination in analyzing the compound tonal coloring of a symphony orchestra, a string quartet, a mixed chorus, or even a jazz band, whose muted brass and elaborate percussion have added much to the timbres of modern music.

The final organizing factor is *form,* and this is largely an intellectual process, but based also upon human instinct and universal laws. The organizing factors of rhythm, melody, harmony, and tone color must all be brought together under the general head of form, to create a complete composition. The basic pattern of form may be summed up as *statement, contrast, reminder,* often expressed by the letters ABA. A composer states his theme, which may be called his chief melodic idea. He then introduces something to provide contrast, suspense, even conflict, as is customary in all art, fianlly reminding the hearer of the material which had been presented at the outset.

This simple pattern of form applies to all music, from a primitive folk tune to an elaborate symphonic movement. It is the principle followed by a novelist or playwright, who similarly introduces his characters at the start, then creates the conflict and suspense of a good plot, and finally arrives at a happy or at least a logical ending.

In music the themes or tunes are the characters, and such words as *exposition, development* and *recapitulation* are used, very much as on the stage. In fact, these same words are applied to sonata form, perhaps the most elaborate in all music, appearing regularly in the first movement of a sonata, a symphony, a concerto or a string quartet. It is actually a development of the simple ABA formula which can be found in the chorus of any popular tune. The first section (A) is generally repeated for emphasis, with B serving as contrast and A finally returning as a reminder. (This basic form is found in such an excellent song as Jerome Kern's *Smoke Gets in Your Eyes,* as well as in a folk tune like the French *Au Clair de la Lune* and thousands of other famous pieces of music.)

In sonata form, the contrast is provided by a development of the melodic material, appearing in at least two themes or subjects, corresponding to the hero and the heroine of the play or novel. This development, sometimes known as a "free fantasia," carries the tunes into various keys, breaks them up or turns them upside down, hands them over to various instrumental combinations, changes the harmony and perhaps the rhythm, and even plays them against each other in the polyphonic style called "counterpoint" (meaning "point against point" or "note against note"). This is the most difficult part of a symphony for the inexperienced listener, but if he is familiar with the tunes, it becomes increasingly interesting, just as the details of architecture grow upon the beholder after the fundamental outlines have been grasped.

Musical contrast may also be provided by "variations" which are

literally decorations or embellishments of a theme. (The form has become very popular in the improvisations of swing and "hot" jazz, whose devotees are generally unaware that their enthusiasm is responding to the lighter version of an established classical convention.)

Beyond these elaborations of the song principle, most instrumental music is based on dance forms, such as the rondo, the minuet, the gavotte. The rondo is literally a round dance, with one tune returning again and again, in contrast with other interpolated themes. The minuet is the classic dance in triple time (slower than the waltz) and appears often as a symphonic movement, with the scherzo eventually taking its place. The classic suite, forerunner of the symphony, was actually a set of dances strung together without any necessary relationship.

The listener who acquires the habit of approaching music through its organizing factors of rhythm, melody, harmony, tone color, and form will find no difficulty in enjoying and perhaps appreciating almost any composition whose greatness is established by the test of time. He can remain open-minded as to modernism and jazz (both of which represent the distortion of the conventions of music), and if they honestly appeal to him, he has no need to feel ashamed. It is well, however, to build up a fairly solid background of the recognized classics before venturing upon too many experiments.

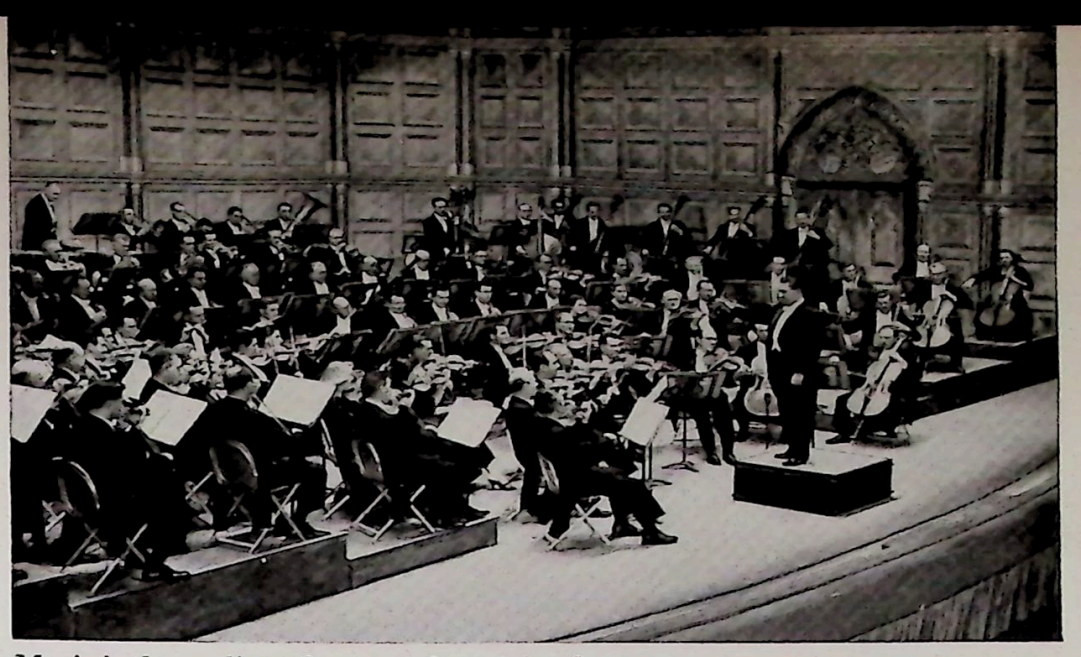
The music that one is likely to hear nowadays, through radio, records, and actual performance on the concert or operatic stage, can be classified in a number of ways. The broadcast division perhaps is that between *vocal* and *instrumental* music, and of the two the former is definitely the more popular, if only because the addition of words makes immediate understanding far easier. Grand opera has the further advantage of action, costumes, and scenery, and may therefore be considered the most obvious and at the same time the most elaborate of all types of music. Ballet achieves a similar effect through pantomime, and this also appeals automatically to a large public.

Another common distinction is that between *program* and *absolute* music. The first term applies to compositions that tell a story or paint a picture, perhaps indicated only by a descriptive title, like Liszt's *Dream of Love*. Technically the term "program music" is applied only to instrumental pieces, although in its broadest sense it necessarily covers all vocal music, whose program is made quite clear by the words. Absolute or "pure music" depends entirely upon mere tonal patterns for its effect, getting no help of any kind even from a title or a program note. It is fair to say that if a piece of absolute music inevitably produces a certain mood or emotion it must be conceded the highest possible merit. On the other hand, a piece of program music may well have an absolute value, worth hearing for itself alone, regardless of pictorial or narrative significance.

For the untutored explorer in the endless field of music the best and most satisfying start can be made in the direction of vocal music, and this has been clearly proved with children as well as adults. Simple songs appeal to everyone and require no elaborate machinery of appreciation for their enjoyment.

The quickest response to both vocal and instrumental music may be created by strong and obvious effects of rhythm, and this also appeals to young and old alike. Dance tunes of all kinds have no difficulty in winning a direct and favorable reaction, without requiring any study or analysis. After such simple discoveries, the development of music appreciation may go as far as the individual desires.

Program music will generally be found easier to grasp than absolute music, and this is again a natural process of selection. Eventually adventures in tonal design will be found just as fascinating as the interpretation of a definite meaning or the awareness of an abstract emotion. The enjoyment of music rests ultimately with the individual, and if this response is not sincere and spontaneous, no amount of study will make it so.

If music is "the organization of sound toward beauty," the chief emphasis must be on the final word, and beauty has not yet been satisfactorily defined. To say that it is the same as truth is an evasion, for truth itself has remained indefinable. But the discovery of permanent beauty in any form, and particularly in the universal language of music, is an experience that anyone may enjoy, entirely personal, and contributing enormously to the enduring satisfactions of life. ♦

*Music is the mediator between the spiritual and the sensual life.*—BEETHOVEN

*The man that hath not music in himself, and is not moved with concord of sweet sounds, is fit for treasons, stratagems, and spoils; let no men trust him.*—SHAKESPEARE

*The highest graces of music flow from the feelings of the heart.*—EMMONS

*Music is the child of prayer, the companion of religion.*—CHATEAUBRIAND

# THE MEANING OF CHARACTER

Instincts

Habits

Impulses

Emotions

Sentiments

*from the Wisdom of Encyclopedia Americana*

CHARACTER, a word originally denoting a die for stamping coins as well as the device stamped upon them, comes directly from ancient Greek. In familiar usage its meaning became broadened to include a device for marking or writing, such as a stylus, and the symbols produced through its use. In contemporary English the word retains this sense, and it may be used to allude to letters of the alphabet or other signs in handwritten or printed language. By the 5th century B.C. character had acquired the meaning of the unique, differentiating aspects of an individual, a nation, or a form of literary expression. Such writers as Herodotus and Aeschylus employed it in this broad sense. The classical rhetoricians and literary critics used the word to designate various literary forms and personages in literature. This ancient connotation has been retained in modern usage. Thus, one speaks of the characters in a Shakespearean play, for example, or of "characters from the pages of history." There is justification for using the word character as a synonym for personality.

Implied in the ancient Greek denotation of the word is an emphasis upon something which is unique. Obviously, to thwart counterfeiters the Greeks took utmost care with their *characters*—namely, the dies used to mint coins and the devices on the coins. This connotation

doubtless led to the use of the term in such literary characterizations of types as that attributed to Theophrastus (about 287 B.C.) and introduced into European literature as a popular literary form by Jean de La Bruyére (1687). A "character" was an interesting type of individual described in an entertaining, concise essay. In more recent years (1912–1932), the Boston writer Gamaliel Bradford revived this literary convention in his "psychobiographies" or character sketches of eminent persons; and Edgar Lee Masters created fictitious characters in the stanzas of his *Spoon River Anthology*.

The Christian theologians employed the word in a different sense. St. Augustine, for instance, mentions the unique characters or signs which the soul receives as the individual goes through the various rites of the church. St. Thomas Aquinas established this use when he wrote of *character baptismatis* and *character confirmationis*. One achieves character by observance of religious practices, and the soul gradually takes on new attributes as a result. The older connotations still continued in daily speech and secular writing, and the word acquired many different meanings.

Immanuel Kant invested the word character with an ethical or religious meaning. In his *Kritik der reinen Vernunft* (1781) he distinguished between empirical character (that which follows the natural laws of cause-effect and which is determined) and intelligible character (that which is not subject to causal laws and which is free to choose). In his *Anthropologie* (1798) he describes physical character (the body and its disposition or temperament) and moral character (that nonmaterial aspect of man which he may achieve through ethical striving). He proposed that the term character be limited in use to designate nothing but what he referred to as moral character.

Modern writers on biology, however, often use the word to designate physical traits or characters. Lamarck (1744–1829), for instance, wrote about the possibility of hereditary transmission of acquired characters. August Weismann (1834–1914), on the other hand, upheld the view that congenital characters (in this restricted sense of the word) are biologically inherited but that acquired characters cannot be transmitted. Contemporary writings on genetics often contain allusions to Mendelian characters such as white forelock or webbed fingers.

In ethics and in educational psychology the word connotes an evaluation of personality in terms of some code or standard of moral principles. Thus, when a person's character is evaluated, the judge must take a moralistic, judgmental point of view. The Christian and the Hebrew theologians find in the Scriptures those standards or norms whereby they are able to make evaluations of the moral worth or character of human beings. In legal evaluations the court makes use of precedents or of codes to attempt to make objective, impartial judgments about the character of a person on trial. Witnesses may be called to testify as to his character. In this frame of reference, the evaluation and the definition of character may become ambiguous and subjective. Nevertheless, there does seem to be a need to have valid standards whereby character may be evaluated. A major objective in educational work, religious and secular, is the furtherance of character development. The principal difficulty in secular endeavor is that of finding a valid, tenable, just code or norm for evaluations.

The popularity of cultural anthropology as a field of study has disseminated the concept of moral relativism. That means that judgments may be made only when the total frame of reference is taken into account as it exists in the particular society or subculture. Actions which indicate a nobility of character in one age may be quite impossible in another age. Similarly, there are no objective codes whereby any conduct may be evaluated in terms of character. Needless to say, this concept has aroused indignant replies from ethically and religiously oriented persons.

Studies of juvenile delinquency have brought into attention the concept of determinism. This, like the concept of moral relativism, is a disturbing view to those who uphold the belief in moral absolutes and in freedom of choice. In the Kantian sense of the term, character implies a negation of both of these concepts. The individual must be judged by his actions, and in these matters he has freedom of choice. If he has a low character, he chooses low goals; if he is noble in character, he chooses lofty goals. Obviously, the adjectives "low" and "lofty" imply an acceptance of moral absolutes. Complex questions arise in the study of the theory of ethics, and these are but two relatively simple examples.

In 1928 the first of a series of important research investigations dealing with character was published. Known as the *Character Education Inquiry*, these reports describe the manner in which various character traits (for example, honesty) were defined, the techniques devised to measure them, and the results of an intensive program of testing. Hartshorne, May, and others tested more than 11,000 pupils from 6 to 16 years of age. Some representative findings are of interest here: (1) attendance at Sunday schools of the conventional type and memberships in youth organizations which are designed to foster character development have very little relation to scores on honesty-deception tests; (2) much inconsistency is found among measures of honesty-deception, pupils honest in one situation cheating in another; and (3) there is a significant relationship between the scores on these tests and the socioeconomic status of the home, pupils from privileged homes having better scores than those from marginal homes. This objective inquiry into the nature of character has stimulated a considerable amount of research by other investigators in many parts of the world. ◆

*Nature is man's teacher. She unfolds her treasures to his search, unseals his eye, illumes his mind, and purifies his heart; an influence breathes from all the sights and sounds of her existence.*—STREET

# SLEEP AND DREAMS

*Blessings on him who first invented sleep. It makes the shepherd equal to the emperor, and the fool to the wise.*—CERVANTES

*from the Wisdom of Encyclopedia Americana*

SLEEP is a normal condition of the body which occurs periodically and is associated with a depression of physiological function. Sleep appears to be necessary for the repair of the processes of the living body. There is a depression of all of the functions of the body to some degree but the depression of the central nervous system and the brain is especially marked, resulting in the unconsciousness which is called sleep.

The cause of sleep is not accurately known although it is easy to prove that sleep is absolutely essential for the well-being of the body. Attempts have been made to compare the hibernation of certain animals with sleep but there is now general agreement that hibernation differs from sleep in that it is not a biological necessity while the lack of sleep is not compatible with life.

The amount of sleep required to maintain the body varies with age. The newborn baby requires as much as 22 hours of sleep per day, the normal adult usually requires seven and one-half to nine hours, and the aged may require as little as five or six hours of sleep per day. On the average males require more sleep than females. There is no evidence that sleep is more beneficial at any particular time of the night although the depth of sleep may vary considerably. There is no doubt that sleep is deeper at night than sleep taken during the normal waking hours.

The loss of sleep produces characteristic disturbances in body function. The most important disturbances are in mental behavior. Men kept awake for periods of up to one hundred and eighty hours were unable to concentrate or to do fine work, and they rapidly developed hallucinations and extreme irritability. All of these symptoms refer directly to the nervous system. There were no significant changes in the circulatory or respiratory systems nor in the biochemical constituents of the body.

There is a close relationship between sleep and body temperature. During the hours of sleep the body temperature drops markedly. This probably explains the need for warmer covering during the night. This change in body temperature is related to the sleeping habit. If the hours of sleep are reversed so that sleep occurs during the daylight hours, the temperature cycle will also change so that the lowest body temperature occurs during the new period of sleep. It has been demonstrated that men placed in a cave and forced to observe a twenty-eight-hour day can adjust their temperature cycle to the new schedule. It is also known that persons kept awake for long periods of time have periods of decreased body temperature which is associated with a desire to sleep. It may be concluded that the desire to sleep during the night hours is a conditioned response brought about by our lower capabilities in the dark and that this response can be modified as can any other habit.

Despite the universal practice of sleep we know very little about its mechanisms. Many theories of sleep have been advanced including (1) the influence of cosmic forces, (2) the active inhibition of the cerebral cortex, (3) the presence of a *hypnotoxin* produced by the fatigued brain which depresses the nervous system, and (4) the exhaustion of a *wakefulness* substance which keeps the brain awake. The most logical theory states that the brain is kept wakeful by the arrival of nerve impulses from the periphery of the body and that a decrease in the number of these impulses allows the brain to slip into unconsciousness. The impulses to the brain decrease when the muscles tire, and when sensory impulses decrease. Conditioned reflexes such as the habit of retiring at a certain time also tend to produce sleep.

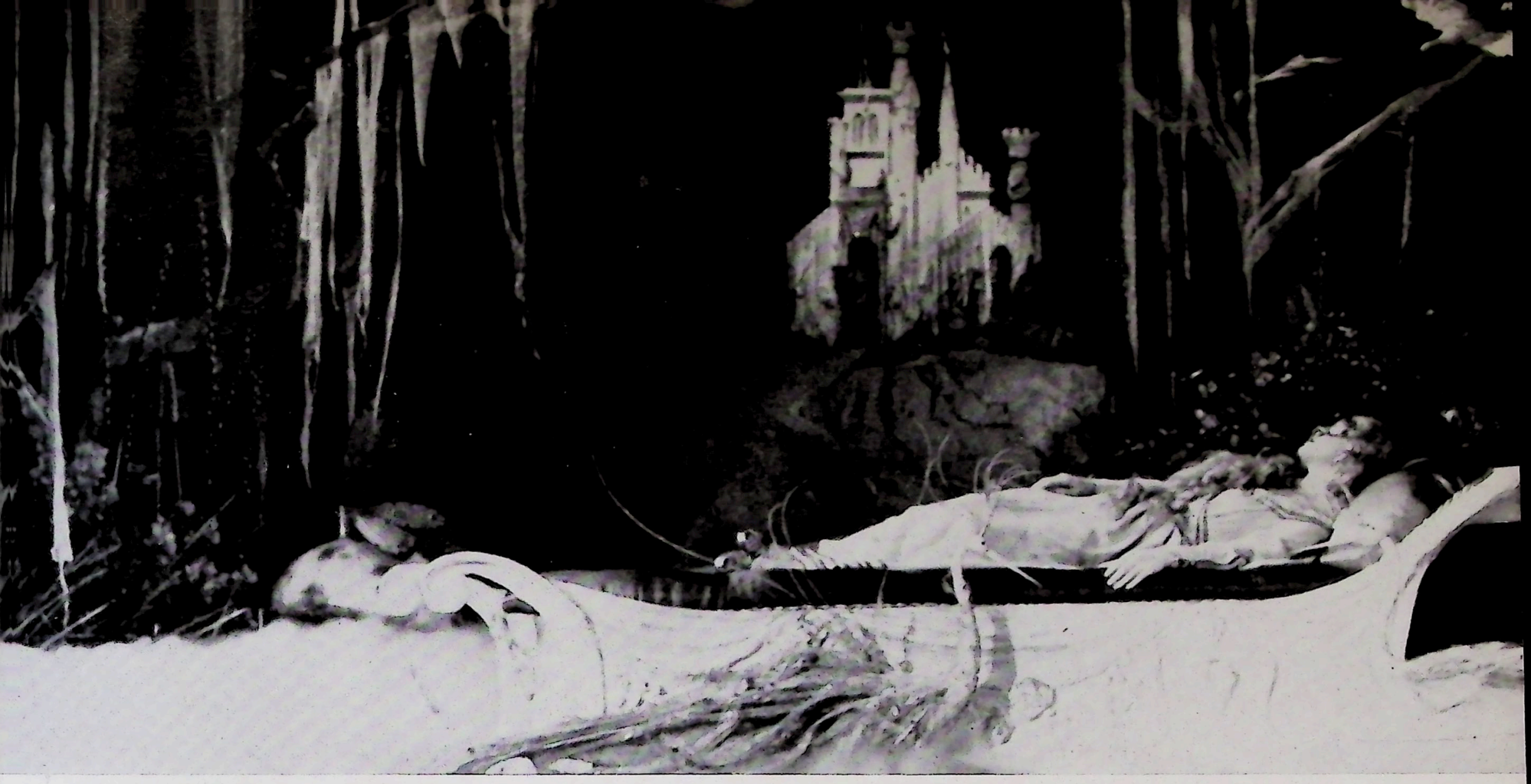
There are certain disorders of sleep. Narcolepsy is the desire to sleep for short periods of time during normal waking hours. The desire is almost uncontrollable and usually occurs during a period of inactivity. Insomnia is the inability to fall asleep readily. There appears to be little relation between the length of insomnia and the period of recovery. Short periods of sleep can produce complete recovery from long periods of insomnia.

Dreaming is a phenomenon associated with sleep. It may be called a series of hallucinations in which the dreamer plays an important part. Dreams may have all the components of natural waking periods but are usually distorted. They are of short duration, most dreams occurring in a matter of minutes.

Dreams have been a subject of intense interest to thoughtful people since time immemorial. They have been variously thought to elaborate the past, to foretell the future, to be harbingers of good or bad fortune, and to presage the coming of great events.

For our modern concept of dreams we are in debt to Sigmund Freud, who established the basic principles which to this day guide our understanding and investigation.

Dreaming is a universal phenomenon, though much of what we dream may be forgotten, and some few persons are able only rarely to remember



their dreams on waking. The dream represents mental activity during sleep. For this reason the workings of the unconscious mind can be more plainly seen here than anywhere else. Ordinarily the thoughts and wishes of the unconscious mind are unknown to us, though it contains the fountainhead of creative and instinctual energy. Phylogenetically the oldest part of the conceptual thinking apparatus, it makes liberal use of such primitive methods of representation as symbolism. In a very general way, the unconscious mind of present-day man may be compared to the conscious mind of the caveman, and dreams often remind us of the picture writing of the caveman, where a relatively few simple pictures used as symbols told a detailed story of events.

In addition, it is the function of a dream to express a wish, but since the wishes of the unconscious are often highly instinctual in nature, they would be as disturbing to most modern persons as would the acts of a caveman in present-day society. Therefore, most dreams are disguised enough to conceal their true meaning from the dreamer. This is accomplished through the intervention of the conscience, a much more recently developed function of the brain. In psychoanalysis an effort to derive the true meaning of the dream is made by having the dreamer give all his thoughts and feelings about every element of the dream. These are then pieced together by the analyst, who in addition uses his detailed knowledge of the life history of the individual as a reference point. By this means unconscious thoughts and wishes, as well as long-forgotten experiences, can be revealed so as to give the subject a much more complete understanding of himself. Dreams may run the gamut, some being so simple as to be understood almost at once, others being so complicated as to be impossible of complete understanding.

The stimulus for a dream is often taken from some happening of the previous day. Then by means of symbolism, pictorial representation, displacement, and condensation, this event is used as a backdrop or screen into which are woven the hopes, fears, and deepest strivings of the individual as conditioned by his past experiences in life.

Time, in the ordinary sense of the word, means nothing in dreams. Events which seem to the dreamer to occur over an incredibly long span of years may in fact be dreamed in a few seconds or minutes. The condensation may be so great that a dream, which it takes only a few minutes to relate, may actually contain so much thought material that it takes the subject several hours to relate it and to elaborate in detail his thoughts on the subject.

The unconscious wish, if it is abhorrent to a person's conscience, may be expressed as something repugnant which is repelled, but which nevertheless occurs. Thus a compromise between the instincts and the conscience is effected. The instinctual elements are satisfied by the occurrence of the event, deed, or whatever it may be, while the conscience is satisfied that it has done its best to fight in the interests of what it considers right. In such cases the primitive instincts of sex, aggression, and cruelty have received a measure of release and relief from being expressed in the dream, while through the influence of conscience on the means of expression the subject has been protected from undue anxiety. In some dreams, such as nightmares, these mechanisms fail of their purpose, and as a last resort the subject terminates the dream by waking, thus putting an end to his unbearable anxiety.

A very interesting example may suffice to illustrate some of the points heretofore described: A young man, who had arranged the previous day to undergo a minor operation in the morning, dreamed that night that the operation had been canceled, despite the subject's repeated protests to the surgeon that he desired nothing so much as to have the procedure completed immediately. The surgeon, pale and trembling, confessed that the operation was too difficult for him and declared that a man of greater skill and experience was needed for the task. Having completed the dream, the man passed a restful night's sleep and awoke refreshed in the morning. Thus the dream fulfilled its function of expressing the instinctual wish while satisfying the conscience of the dreamer. Anxiety was overcome and sleep continued its normal course.

The fact was that the subject was secretly very much afraid of the operation, but was far too proud to admit it even to himself, much less to anyone else. He went to bed that night wishing that he had never consented to having it done. In the dream this wish is fulfilled, but it is not our subject who is the coward; rather, in fact, the surgeon. The patient is not afraid in the dream; he only wishes to have the job completed. In other words, the tables are turned completely. Note also how the dream functions to increase the self-esteem of the patient. No longer is his operation a simple affair, but instead it becomes a procedure so difficult that the ordinary surgeon fears to undertake it. ♦

# WHY PEOPLE LAUGH

*from the Wisdom of Encyclopedia Americana*

"MAN," wrote Nietzsche, "is the animal most capable of suffering, and he had to invent laughter to preserve his sanity." The stimuli of laughter and those of fear and rage are closely connected. The newborn baby exhibits what we behavioristically interpret as fear at: (1) a sudden, loud noise; (2) removal of support; and later, when it develops some power of discrimination, (3) the mysterious, that is, the strange, juxtaposed on the familiar. It exhibits rage when its movements are constricted, and later, when its appetites are thwarted. Similar causes for fear and rage are reported in anthropoid apes. Most practical jokes can be reduced to an exploitation of these primarily shock situations. The firework exploding behind one's back, the collapsing seat, and the "lost" parcel, which, when one stops to pick it up, is jerked away by means of a string held by an urchin around the corner, are examples. When we remember that perception is primarily instrumental, a sign for readjustment, we understand why the mysterious produces suspense or indecision, which, in the emotional sphere, is close to anxiety, and in the intellectual, to doubt. Hence—particularly among the less educationally and intellectually adaptable—the tendency to find ludicrous new scientific concepts, new idioms in art, new fashions in clothing.

Tickle spots on vulnerable parts of the body stimulated our ancestors to wriggle from the clutches of a captor. When the tickler is known we laugh; if not we exhibit fear or anger. Because primitive courtship was closer to marriage by capture, the adolescent girl is particularly ticklish. James Joyce calls her a "gigirl"—the giggle being both an invitation and a defense. Anthropoid apes produce chuckling sounds analogous to those of human laughter in: (a) playful lack of support situations, such as being swung on the arms of a keeper; (b) in catching and escaping play; and (c) being tickled by a friendly keeper, but are incapable of laughter at the ludicrous, which requires a power of abstraction beyond their capacity.

Because the infant's lip movements in smiling are close to those of anticipation of feeding it is not easy to date the first smile. If we take the brightening of the eyes as a criterion, most observers find the first true smile towards the end of the second month (about the time when the first real tears flow), and the first laugh at least a month later. This suggests that weeping and smiling do not appear until there is some power of comparison between expectation and actuality. This is the genesis of the symbolic process which distinguishes cognitive processes from mere conditioning or reacting to signs. For a period from the sixth month, vocal response to speech, typical of an earlier and a later period, practically disappears, but at this time there is an increase in crying, particularly at strangers, who, earlier confused with the parents, are now seen as mysterious. Soon, increased mental development makes clarification easier and the laughter or smile of greeting becomes prominent.

The young child's delight in "peep-bo" games and such toys as the Jack-in-the-Box expresses his interest in experimenting with the unexpected—hence potentially fearful—to gain control over it. In the past, when school discipline was severe, he lessened his anxiety by burlesquing the schoolteacher, as Londoners in World War II burlesqued Hitler and joked about his bombs. Eighteenth century pirates at times occupied their leisure by mock trials for piracy, the prisoner one day being the judge the next. Besides acting as a catharsis for a brooding fear, this burlesque play initiated adaptability and boldness when confronted with a real trial.

The adolescent's proneness to risqué jokes expresses his ambivalence between desire and socially conditioned repressions, between the animal and the idealized aspects of sex. When students were asked to rank in order of preference a number of jokes, it was found that there was a positive correlation between high rating and obsession (positive or negative) with such subjects as violence, sex, and alcohol. Studies of the types burlesqued and caricatured in literature at any epoch reach a similar conclusion.

In many primitive societies we find an institutionalized joking relationship by which people bound by rights and duties are allowed to "let off steam" by burlesquing and tricking or insulting their joking relatives. Between the young of opposite sexes this relationship is a medium of stimulation into approved alliances, and inhibition of any tendency to alliances made tempting by proximity but disapproved by kinship rules.

A similar ambivalence is found at the roots of comedy and clowning. Greek comedy evolved from a ritual which by mimetic sympathetic magic, aimed at (a) stimulating fertility, and (b) the destruction of

the forces hostile to this; hence the obscenity and satirical elements in Aristophanes. In Europe, clowns were fertility figures, and in America impersonators of chthonic beings (gods or spirits of the underworld) with identical farcical attributes, which in the course of time became their distinguishing features. As belief in the magical ritual lessened, the farcical aspects were emphasized. In legends, fertility and death figures and their messengers tend to become comic tricksters. There is much evidence to support the view that Falstaff evolved from the *Vice* of the Morality Plays. Often, as among the Arabs, we find the mentally abnormal either treated as butts and nuisances or as holy and in contact with the supernatural. The original meaning of "idiot," "innocent," implied "natural," that is, free from education and hence from guile and deceit. Fyodor Dostoevski's *Idiot* is a sublimated version of the same belief. Oliver Goldsmith's "loud laugh that spake the vacant mind" is usually interpreted as the guffaw of the rustic at what is beyond his comprehension, but it is just as likely that the author meant free of care and calculation—closer to Jean Jacques Rousseau's natural man.

In the relatively static and convention-ridden medieval society, the Fool, a survival of the inspired idiot, with the privileges of the motley could openly say what the more serious dared not even hint. His master was at liberty to laugh either *at* or *with* him, remembering that many a true word is spoken in jest.

Many of the functions of the medieval fool are now performed by the humorist. In the Middle Ages when the universe was conceived as a grand chain of being in which each was born into a particular station with its duties, elaborate courtesies lessened stresses. When that broke down and the Renaissance discovered variety, change, and the will, something analogous to a joking relationship between classes, ranks, and ideas appeared. Comedy became a strong current in the main stream of literature in the 15th century, musical comedy appeared in the 16th, and caricature portraits became prominent in the 17th. The relatively stable Augustan Age excelled in satire and wit; the Romantic Movement almost defied humor, which can be conceived as a joking relationship between the limits of actuality and the possibilities of the ideal. It is a humanization of laughter—*with* rather than *at,* which evolved with the discovery of subjectivity and the tendency to introspection.

The physiological accompaniments of the emotions of fear and rage prepare the body for action (attack or flight) and stop the digestive processes. If this energy is not expended there is a lack of balance. The explosion of laughter consumes it internally, hence the Romans were justified in their claim that laughter at meals aids digestion. Physiologically, then, laughter may be conceived as a substitute for action.

Since Grecian philosophers postulated immobility as a characteristic of Deity, and valued contemplation and reason above action, which was left to slaves and servants, this ideal of *being* rather than *doing* was characteristic of aristocracy which aimed at keeping emotion in check. The Earl of Chesterfield's advice to his son, that laughter is "illiberal and ill-bred . . . true wit or good sense never excited a laugh since the creation of the world," is in keeping with an ancient tradition. The Church Fathers, suspicious of the dissolving effect of laughter, reiterated that, while Scripture mentions that Christ wept, there is no evidence he ever laughed. Félicité Robert de Lamennais in 1841 and Pierre Charles Baudelaire in 1855 wrote that laughter was a mark of man's fall from grace, and before the fall it was nonexistent. Mohammed's favorite wife, Aisha, reported that he "never laughed a full laugh so that the inside of his mouth could be seen, he only smiled," and the Arabian sheik seeks to follow his example.

The conception of laughter as a substitute for action explains why a cinema audience finds hilarious the speeding up or slowing down of the motion of animated beings; the alteration in tempo of the parts in relation to the whole produces caricature. Similarly we laugh at a too novel idea, catch up with it, and again laugh at it when we have passed beyond it.

A pearl can be defined in terms of its origin, an irritant in the oyster shell, or in its final transition. Laughter can be explained in terms of feelings of malice or envy; awareness of contrast, incongruity, and ugliness; relief from this experience; or in terms of its more positive result: a feeling of sudden glory; an antidote of sympathetic pain; a surge of vital feeling, or an existentialistic sense of liberty. ♦

*I like the laughter that opens the lips and the heart, that shows at the same time pearls and the soul.*—VICTOR HUGO

*The most utterly lost of all days, is that in which you have not once laughed.*—CHAMFORT

# PSYCHIATRY AND THE HUMAN MIND

...THE PSYCHIATRIST

...THE NEUROLOGIST

...THE PSYCHOANALYST

...THE PSYCHOLOGIST

*from the Wisdom of Encyclopedia Americana*

PSYCHIATRY is a branch of medicine concerned with the study, treatment, and prevention of emotional, social, and spiritual maladjustments. Its goal is to achieve greater individual and social maturity, to enhance human satisfactions and happiness, and to encourage constructive living. From its humble beginnings in crude hospices for the insane, psychiatry has grown and expanded into a multifaceted discipline, with many specialties such as mental hygiene, psychoanalysis, childhood psychiatry, forensic psychiatry, industrial psychiatry, and others.

Psychiatry passed through several eras before it attained its present significant position. From earliest times until the 18th century it was dominated by the concept of demoniacal possession as the cause of insanity. This led to shameful abuse and torture of the mentally sick. The first telling blow against such inhumanity was delivered by Philippe Pinel, who struck the chains from the insane in the Salpêtrière in Paris. Many years elapsed, however, before humanitarianism gained a firm foothold in the treatment of the mentally ill. Next there was the descriptive era, climaxed by the work of Emil Kraepelin in his clinic in Munich, Germany. For a time, descriptive psychiatry served a useful purpose with its meticulous descriptions of how the mentally sick behave. Gradually, however, its usefulness waned, since it gave little or no explanation of why patients behave as they do. Furthermore, it deteriorated into a multiplicity of artificial fissions of diagnoses, as many as 15 for one psychosis, dementia praecox. Then came the period of interpretive psychiatry, which sought to find underlying reasons for human behavior in psychosis and psychoneurosis and in the so-called normal. Its great leaders were Sigmund Freud and Carl Gustav Jung. While they and their co-workers did not discover the hidden or unconscious mind, they did emphasize its tremendous significance, identified a considerable part of its content, and demonstrated conclusively that a large portion of human behavior is prompted and activated by a mind, the content of which is not within the realm of awareness or consciousness.

Psychiatry now pursues two major objectives. The first has prompted very active research at psychological and chemical-metabolic levels. It seeks to find closer alignments and integration between the chemistry of the central nervous system of man and his behavior. The other objective is to constantly increase and expand our understanding of the human personality and of human behavior in health and sickness. With ever closer liaison between these two objectives, the advances of therapy will be of immeasurable benefit to patients and to humanity.

In a general way, we may think of psychiatric illness as divided into *psychoses* and *psychoneuroses*. In the psychoses there are apt to be gross symptoms: disorientation, hallucinations, delusions, and many others. Often phantasy is substituted for reality, and the personality is disrupted. In the psychoneuroses the symptoms are usually less marked, much of the hold on reality is retained, and much of the personality remains intact.

Human personality is that quality which not only makes a man but makes him a particular man, different from all other men. Its composition and its ramifications are too fluid and far-reaching to be contained in a cage of words. It may be viewed as consisting, first, of a core which we bring into the world at birth; the ever-changing individualized personality at any moment of life thereafter is the condensed record of all the experiences, physical and emotional, and even the thoughts which that person has had up to that instant of time.

Psychotic states may be divided into *organic psychoses, toxic psychoses,* and *functional psychoses* (in which may be included the psychoneuroses). In the organic psychoses, of which paresis (syphilis of the brain) and senile psychoses are typical examples, there is a well-defined pathology, often destructive, in the cells, tissues, and blood vessels of the brain. Usually the process is irreversible, and recovery is scarcely to be anticipated. However, much can be accomplished by skillful treatment, and recent investigations into the metabolic chemistry of the central nervous system give good promise for the future. Mental defect is placed in the organic group, since in low-grade defect there are not enough brain cells to make possible average intellectual functioning.

Toxic mental reactions are apt to follow the taking into the body of exogenous poisons such as alcohol and drugs, or toxic substances encountered in industry. The central nervous system is quite vulnerable to substances like white lead and more recently radioactive materials. Toxic mental symptoms may also have their origin in endogenous intoxications. Here the toxic substances are produced within the body, as in various infectious diseases (pneumonia and kidney or liver disease). In this area, new antibiotic drugs like penicillin have reduced the incidence of mental symptoms, since often they overcome the infection before mental symptoms appear. Finally, with any decided shift in the metabolism of any organ or organs, the katabolic or destructive products may exceed the anabolic or rebuilding products, and mental symptoms may appear.

Usually in the toxic psychoses, the poison is readily identified, and the outlook for recovery is good. As our knowledge increases, we have come to understand some personalities are more vulnerable mentally to both exogenous and endogenous intoxications than others. It is well understood, too, that in alcohol and notably in drug additions, certain personalities succumb much more readily than others to the seduction of drugs.

The term "functional" is commonly used to designate psychoses such as schizophrenia, manic-depressive conditions, and psychoneuroses in which there is insufficient organic or toxic evidence to explain the symptoms. Functional is perhaps an ill-advised term, since further investigations may uncover organic or toxic evidence, particularly in the psychoses. Furthermore, physical symptoms may and do appear in so-called functional reactions and functional symptoms in organic and toxic states. Finally, the term "functional," as it is used, creates an artificial dichotomy. Man is basically a unified functioning organism, with body and psyche entwined and acting together. All human sickness, from a cold in the head to schizophrenia, is functional, since normal functioning is disturbed. The only difference between so-called somatic and mental illness is that the symptomatic accent in one case is heavier on the somatic side and in the other on the emotional side.

The psychoneuroses, sometimes called minor psychoses, appear in many forms (hysteria, neurasthenia, obsessive-compulsive states, and anxiety states) and have manifold symptoms. Anxiety is common. Sometimes the symptoms appear to be chiefly psychic, like obsessions

and compulsions, in which case the patient's mind is dominated by a certain thought or phobia (fear). This may lead to compulsive behavior like wrapping a towel around the knob of a door before turning it, for fear of infection by germs. Usually patients recognize the futility and absurdity of their behavior but cannot depart from the ritual. Often there are psychosomatic symptoms in the psychoneuroses. It is now understood and accepted that many symptoms occurring in human illness—backache, headache, pain, nausea, vomiting, vertigo, and many others—are not necessarily due to inflammation or destruction of the cells and tissues of organs of the body, but are the physical expression of psychic material resulting from anxiety produced by unsolved emotional conflicts pushed back or repressed beyond the portals of consciousness.

The concept of mind-body unity is so important that it deserves special emphasis. Psychiatry's insistence upon the fundamental functioning unity of man should be awarded priority as a contribution to the theory and practice of medicine. If the iron curtain between hypothetical body and psyche had not been demolished, modern medicine could scarcely be practiced. It is now understood and accepted that while a process or happening may be preponderantly physical or psychic, it is never restrictedly one or the other. Every somatic occurrence in health or sickness is reverberated in the emotional depths of the individual and emotional states, severe or mild, are manifested in the body.

From mind-body unity there flows naturally the concept of psychosomatics—the physical symptomatic representation of unsolved emotional conflicts. Psychosomatics is of ancient lineage; and for many thousands of years human beings have been trying to tell their medicine men and their doctors that under emotional stress they had "lumps" in their throats, were "paralyzed" with fear, "blinded" with rage, and so on. Briefly we may think of three psychosomatic levels. The first is entirely normal, the innumerable and ever-changing bodily sensations in response to a myriad of emotional shifts, great and small. In health these bodily sensations make little or no impact on consciousness. At the second level the person becomes more or less constantly aware of the somatic sensations, perhaps merely a few stomach rumbles. He attempts to analyze them, ruminates about them, and becomes anxious that they might signify some serious organic disease. The third level is the important one, at which internal medicine and psychiatry meet. The organs and parts of the body have enormous elasticity and rebound; but if the anxiety is too prolonged, they may lose their elasticity, not be able to respond any longer, and finally protest in terms of organ pathology (for instance, a peptic ulcer or even heart and circulatory disease). The organ or part is then like a rubber ball which has been bounced too often.

Modern psychiatry should be credited with producing a more dynamic concept concerning etiology (causation). It discourages the mere fixing of a diagnostic label to a case. Such etiologic orthodoxy is not permissible even in well established conditions like paresis or tuberculosis. True enough, the spirochete and the tubercle bacillus are weighty in producing syphilis and tuberculosis, but the spirochete does not explain why, of all those infected with syphilis, less than 2 per cent develop paresis. There may be many other reactions—skin, cardiovascular, aortic, bone, spinal cord, indeed in any tissue of the body. The same is true in tuberculosis and many other diseases.

Unquestionably, the most important psychological contribution to psychiatric therapy is psychoanalysis. It is a technique which by free association (expression of uninhibited thinking), dream analysis, transference, and other avenues attempts to bring the patient to an understanding of his childhood traumata and his life's conflicts, and finally to an adjustment in his emotional life. Psychoanalysis has lifted psychiatry from the doldrums of clinical description, encouraged patients to talk freely, taken the taboo from sex, and recognized its dynamic influence. Above all, it has opened the way to and blazed the back trails of the unexplored land of the unconscious.

Undoubtedly, psychoanalysis has its faults. Perhaps it elevates conjectural theory into fact too readily, and is often too rigidly dogmatic. It is unfortunate also that many analysts are only faintly interested in the significance of the advances that have been made at the physiological, electrical, chemical, and pharmacological levels of mind-body functioning. A further drawback is that about 7 out of every 10 patients who present themselves for treatment are not available for or would not be helped by formal, deep analysis, which of necessity is a lengthy and expensive procedure.

The majority of psychoneurotic patients are suitably treated by general psychotherapy, which may be defined as "any honest measure of treatment emerging from the relationship between patient and doctor which improves the understanding and attitude of the patient toward self, toward his illness and toward his environment." While general psychotherapy is more or less on the conscious level, it is not superficial. Usually it breaks through the periphery of the repressed, troubling, symptom-producing conflicts, and more often than not it penetrates them deeply. In all cases, general psychotherapy attempts to be antidotal to the unconscious conflicts of the patient.

This is a highly important technique. The group leader no longer consumes valuable time by delivering a lecture, but presides informally, perhaps guiding the discussion into fruitful channels or steering it away from dangerous waters. The group leader must expect to be identified by the patients with figures in their previous lives—sometimes pleasant identifications, but often hostile. Usually there is prompt desensitization, since the members of the group soon learn that others suffer from symptoms much like their own. In the free exchange of opinion and discussion, there is release and thinning out of fear, depression, guilt, and hostility. Group therapy is available in a large area of psychiatry, even including old age disorders. It is an important contribution, not only because it makes a considerable impression on a large patient load (10 to 15 in each group), but also on its merits as a dynamic technique.

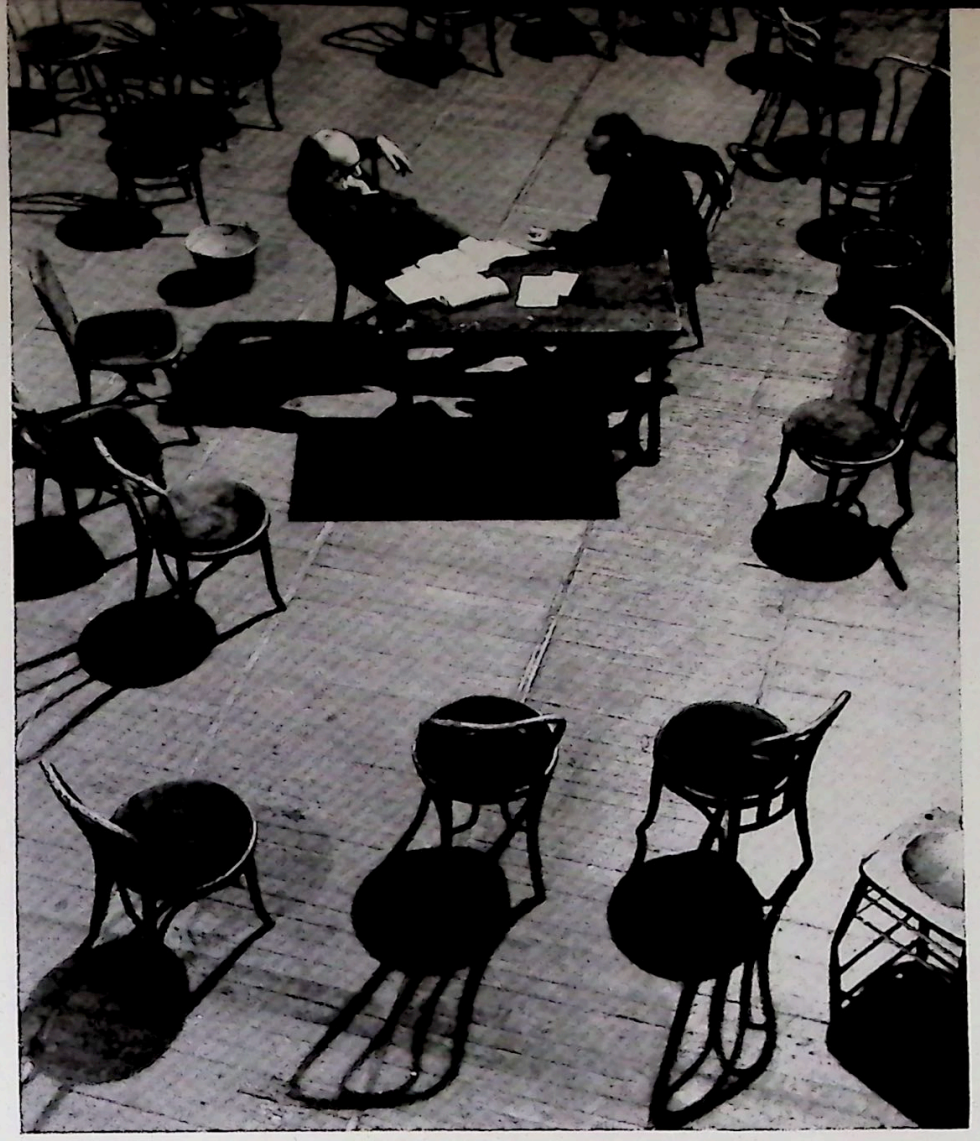
The principal drastic therapies are insulin shock, electroshock, and the lobotomies. In insulin shock, rapidly increasing doses of insulin are given until the shock level is reached. This is repeated daily for about 60 days. In electroshock, a current of electricity is sent through the brain, producing unconsciousness and a convulsion. Lobotomy and its many modifications is a brain operation in which certain connecting strands of brain tissue are severed.

Extensive neurophysiologic, biochemical, neuropharmacological, and other researches are being carried out in many laboratories and clinics. In one psychosis alone, schizophrenia, investigations are being conducted into neuroanatomical processes, brain function, lower areas and their cortical connections, temporal and frontal lobes, electrophysiology, nerve impulses, oxidative brain metabolism (particularly of carbohydrates), toxic waste products, hormones (especially sex hormones and adrenal hormones), vitamins, endocrines (especially thyroid and parathyroid), and other factors. Similar researches are being carried out and expanded in almost every area of psychiatry. The chief handicap is that researchers know far too little of the human personality and its deviations, and psychiatrists are wanting in knowledge of the biology and chemistry of the brain.

Tranquilizing drugs also occupy much attention. The objective is valuable—to find drugs which do not have serious side effects but will temporarily interrupt the connections between certain brain levels, thus easing depression and relieving tension. At best this goal has been only partially achieved. Tranquilizers are very widely used, and more caution and discretion is needed in their administration.

The shortage of psychiatric personnel is a serious handicap. Only about 30 per cent of the minimum quota of psychiatrists needed is available in the United States, for example. In all areas of psychiatry, particularly in out-patient work, child behavior problems, and marital counseling, the most effective work is done by the team of psychiatrist, psychologist, social worker, and nurse. All these are in very short supply, but the government has spent only a few million dollars to train professional psychiatric personnel.

The principles of the understanding and treatment of psychiatric war casualties developed during World Wars I and II were followed in the Korean War with good success. Now many psychiatrists are engaged in developing techniques to prevent or at least diminish mass hysteria in the event of total war. Psychiatry also hopes to make a contribution to world peace, through its long experience in understanding and minimizing hostility and aggression in individuals. ♦



# THE PSYCHOLOGY OF INTELLIGENCE

*from the Wisdom of Encyclopedia Americana*

IN TRADITIONAL mental philosophy intelligence was defined as a trait uniquely human, and the behavior of animals was thought to be directed by instincts. Human beings, therefore, were thought to be able to master the environment through the exercise of the faculty of intelligence.

Teachers have always recognized the fact that some pupils learn with ease and that others have serious handicaps in ability to master the curriculum. The first successful measure of differences in ability to learn was used in 1904 by Alfred Binet and Theodore Simon in an inquiry into the problem of retardation in French elementary schools. Their novel technique attracted worldwide attention. The famous Binet-Simon Scale was published in 1905 and revised in 1908 and 1911 to incorporate suggestions made by psychologists here and abroad.

Among those who adapted the procedure for use in studies of American school children was Lewis Madison Terman. His test, published in 1916 and revised in 1937, became the most widely used measure of intelligence in America. Whereas Binet was not concerned with a definition of intelligence, Terman wrote that it is the ability to make use of abstract concepts. This definition aroused much discussion. Many other definitions were proposed, but none of them was wholly acceptable to educators and psychologists.

Following World War I, psychologists commenced to write about a number of specific abilities rather than of a single trait labeled intelligence. It was noted that the conventional measures of intelligence seemed to appraise the level of ability to learn the school curriculum, especially the conventional academic studies. Measures of performance in dealing with formboards, puzzles, and mechanical devices yielded scores that were sometimes different from those obtained from verbal tests. It was also noted that a person might do fairly well on both verbal and nonverbal tests of intelligence, but make a low score on a measure of social intelligence. Hence, three different types of intelligences were more or less vaguely defined: verbal, mechanical or nonverbal, and social.

Research centered upon the analysis of intelligence-test scores and their relationship to sex, race, environment, family background, teachers' marks, and afterschool life-careers. Impetus to the use of group tests of intelligence was given by the measures used in the United States Army during World War I. Debates about an unambiguous definition of intelligence were of less interest than efforts to accumulate scores on intelligence tests and to interpret the meanings of these data.

Binet had worked out a technique for evaluating a person's intelligence by comparing his level of success on test items with that achieved by the average individual of a known chronological age. Thus, if a child passed all the tests passed by the average child six years of age, his mental age (M.A.) would be six, regardless of his chronological age (C.A.). Louis William Stern suggested that intelligence-test results might be expressed in terms of a ratio between mental age and chronological age. Terman popularized this method. The scores are converted into I.Q.'s by the formula: M.A./C.A. times 100. Thus, an I.Q. of 80 represents a deficit, and an I.Q. of 120 an excess, of intelligence.

In recent years psychologists have shifted their interests from attempts to measure intelligence, loosely defined as a single trait, over to diagnostic tests of specific abilities. Both here and abroad there has been developed a set of techniques for measuring what are often referred to as primary mental abilities. Scores on these tests have proved to be helpful in the selection of personnel for industry and military assignments as well as in educational guidance.

A plurality of abilities, not a single trait labeled general intelligence, seems to be of importance in predicting a person's likelihood for success or failure in any given field of endeavor. Among the primary mental abilities that now receive attention are the following: verbal comprehension, rote memory, word fluency, number facility, ability to visualize spatial relations, and perceptual speed and accuracy.

It is obvious that intelligence is a difficult term to define. It may very well be plural, not singular, in meaning. The interest continues in the development of predictive scales and tests for the appraisal of abilities. Enthusiasms for theoretical discussions about the nature of intelligence, or intelligences, have greatly diminished both in this country and abroad. Recent investigations have raised grave questions about the traditional dogmas. For instance, it was once assumed by many persons that heredity is the principal determinant of the IQ and that native intelligence reaches its maximum at about age 15 or 16. Considerable doubt has been raised about these inferences and also about the constancy of the IQ as well. ♦

*The dance is of all the arts the one that most influences the soul.*
*Dancing is divine in its nature, and is the gift of God.* — PLATO

# THE WORLD OF Ballet

*from the Wisdom of Encyclopedia Americana*

THE ballet is a composite work of art; the components are choreography, music, libretto, settings and costumes, and dance itself. Whatever may first be manifest in the creative process: the choreographic idea, the musical conception, the literary vision, or even the scenic image, is irrelevant with regard to the completed production.

*Choreography* may mean the technical task of directing the dancers, arranging the sequence of dances, and designing the pattern of directions on the floor or the pattern of movement in space. As such it specifies the key function in the very complex mechanism of baleet production. For coordination, integration, and consistency the ballet action depends entirely on the choreographic plan.

The popularity of the ballet throughout almost five centuries of brilliant history refers essentially to the same set of sensual, emotional, and esthetic responses to which, in a more inclusive sense, the theater owes its lasting validity. In fact, theater and ballet history are mutually interdependent. But, as opposed to the theater, the ballet's visual language is almost universally intelligible, accounting for its easy geographical spread and the international familiarity with its foremost performers and performances. The history of ballet demonstrates a constant shift of emphasis and interest. It passed through operatic stages, through mainly decorative phases, through times of drama and pantomime, through periods of acrobatic virtuosity. But at all times it revealed constant efforts to ever greater perfection of the dance technique as expressive means. Ballet-like dance spectacles were known in antiquity, and many precursory forms indicate the trends and directions which mark the actual beginning of modern ballet history. The lavish social entertainments of the Renaissance aristocracy—triumphs, pageants, fêtes, masquerades, banquets, tournaments, and interludes—contain and develop the characteristics of the later court ballet and masque. When Catherine de Medici introduced the Italian court festivals in France, she inaugurated, and for a long time influenced, the triumphant reign of sumptuous ballets in the French royal courts. The first dramatic ballet, based on the story of Circe, is the *Balet Comique de la Royne* (1581) by Baltazarini, who also composed the music. Preserved in a detailed, illustrated account, the spectacle integrates for the first time dance, music, poetry, acting, costumes and décor in a consistent, harmonious whole.

*Margot Fonteyn by Karsh*

*Ballet—the queen of every art*
*Commands the golden path of heart*
*Through veils of grace she does appear*
*With beauty as her charioteer.*

*Out of the earth, with growing power,*
*Suddenly unfolds—the flower.*

*With stress and strain and constant try,*
*One day you may take the sky.*

*Suppleness and strength and discipline,*
*Exacting forms—for beauty's flowing in.*

*Only the swallow who is free can know*
*Where my searching, dancing feet will go.*

All throughout the Renaissance the interpretation and realization of a unified art-work in the antique sense, combining music, poetry, and dance as equivalent elements, appears as a constantly recurrent preoccupation. Under Italian, and more directly under French, influence a corresponding form developed in England, the court masque, which also combines music, poetry, acting, dance, and decorative elements into a homogeneous theatrical spectacle. While the noble masque was executed by aristocratic amateurs, the comic and grotesque anti-masque was performed by regular professionals.

The French courts established a formal ballet tradition which leads in direct line to Louis XIV who was an accomplished dancer himself, the great and ambitious patron of this art, and the founder of the first Académie de Danse in 1661.

The opera flourished at the same time, performed magnificent opera-ballets, organized the first professional dance troupe, and became the center of ballet in Europe for many centuries to come. The court and opera ballets were operas more than ballets, formal in style, and performed with masks in the heavy costumes of the period.

Independent of the grand opera ballet, and for a long time outside the Paris Opera, the pantomime-ballet developed. It resembles more specifically our modern ballet form, for it uses the dance as its exclusive medium and eliminates spoken or sung passages. As opposed to the loosely tied, void, and highly formal dance spectacle of the opera, the pantomine-ballet stresses the importance of a consistent, meaningful dramatic plot, hence *ballet d'action, choréodrame.* The outstanding representative of this new conception was Jean Georges Noverre (1727—1810).

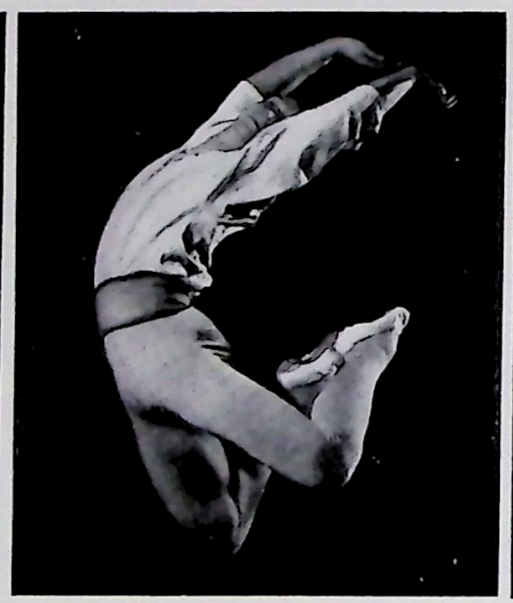
He created innumerable ballets and condensed his principles in several writings, in particular the famous treatise *Lettres sur la danse et sur les ballets*, published in 1760. In radically eliminating all operatic elements, rules, and conventions, he liberated the ballet and established its new authority which was to last till today. The most important feature of Noverre's theories was the idea that ballet is a legitimate art form in its own right, and as such, perfect only in realization of its specific principles and its expressive means and media.

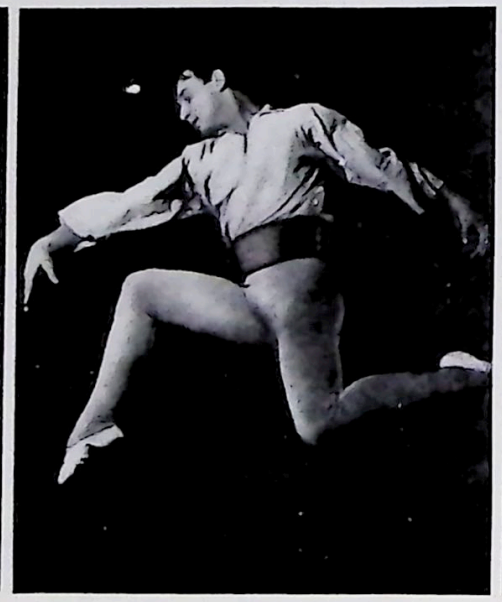
The ballet safely survived the turmoil of the French Revolution

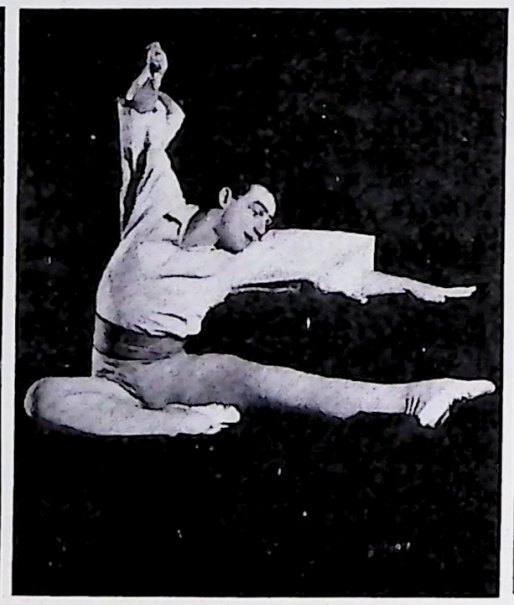
*No rigid form can fetter me,*
*Obey the law, and I am free.*

*Doff your seriousness, life is a game.*
*Any change of mood can be my name.*

*Only an earth-bound, full of grace,*
*Can learn the secret laws of space.*







curiously enough without even as much as reflecting its spirit and its aspect. However, when the powerful tide of romanticism swept over the European world it profoundly affected the ballet; but it did not destroy the foundations of the ballet tradition, nor the solid structure of the orthodox technique built up in rigorous schooling. Though filled with a new spirit, the romantic ballet preserved carefully the classic Italian tradition and virtually continued the pantomime-ballet in Paris. Within a span of roughly fifty years, from 1820 to 1870, the romantic ballet attained utmost perfection during the brilliant first half of the period, to decline rather rapidly during the second. Coincidentally, western Europe lost its ballet supremacy to Russia. Appearing in the title role of *La Sylphide* (1832), the Italian dancer Maria Taglioni (1804–1884) established for all times the prototype of the romantic ballet in spirit as well as in style. Her pure, virginal grace, her spiritual lightness, and her prodigious technique were characteristic of the romantic interpretation of the supernatural and aerial. The costume designed for this part—white, half-length tulle skirt, tight-fitting bodice with bare neck and shoulders—has since been associated with the traditional concept of romantic theatrical dance. Taglioni's greatest rival, Fanny Elssler (1810–1884), represented the more earthly, sensual, and "pagan" romanticism in creating character and ethnographic dances (the Spanish *cachucha*, the Italian *tarantella*, the Polish *cracovienne*). In our present appreciation the century-old ballet *Giselle* contains the essence and the synthesis of stage romanticism. Written by Théophile Gautier and first superbly interpreted by Carlotta Grisi, this essentially poetic work seems destined for timeless validity.

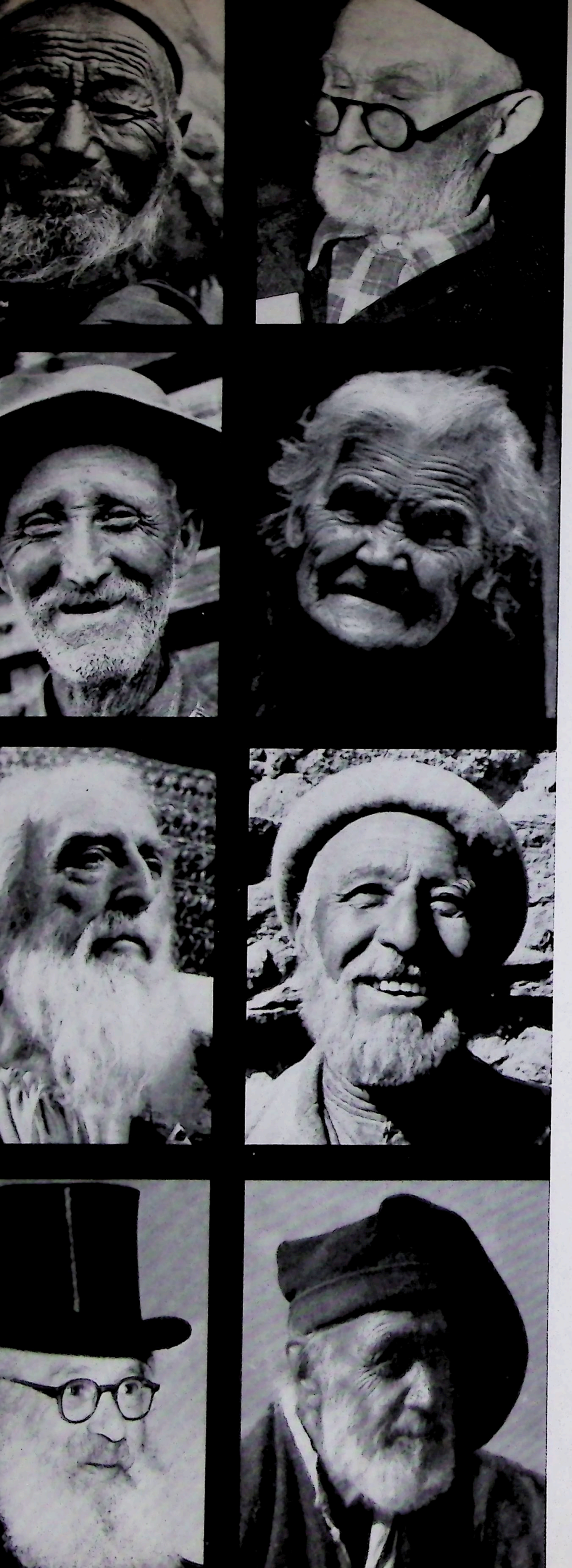
The history of the romantic ballet is truly the history of its great ballerinas; it is forever identified with the legendary fame of Taglioni, Elssler, and Grisi, to whom may be added Fanny Cerrito and Lucile Grahn; in fact, they all survived the glorious and short-lived ballet episode which they had carried to world fame. Elevated by phenomenal acclaim and admiration, these dancing idols became *danseuses étoiles*, dancing "stars," with every modern implication of the term. They affirmed their supremacy to the detriment and eventual oblivion of the male dancer. Although there were such outstanding talents as the dancers and choreographers Jules Perrot and Arthur Saint-Léon, the male dancers gradually lost their former important position, degenerated to merely supporting partners, and became finally insignificant to the point of being replaced by women in travesty.

For its very "romantic" quality the romantic ballet escapes any generally valid definition. In subject matter and style of presentation it reflects the multifaceted spirit of the period; the nostalgic-nebulous lyricism, the weird-violent fantasy, the strange and foreign in folklore and exoticism. However, the term "romantic" as specifically applied to theatrical dance describes a mood, rather than a category. Preserved in sentiment and tradition the "white ballet" (*ballet blanc*) is "classic" ballet today. The white, floating costume and the aerial dance "on the toes" (*sur les pointes*), familiar to the extent of symbolizing ballet par excellence, represented then significant innovations. Beyond their immediate usefulness and aesthetic value they are indicative of a continuous search for new and subtler expressive means where tradition fails to supply an adequate artistic idiom. The new costume, which later developed into the short, many-layered *tutu*, emphasized the freedom of movement; the dance on the toes and elevation, by vigorously stressing the vertical, symbolized the weightless levity of supernatural beings; expressing the poetic-romantic conception of escape from reality. ♦

*Friendship plays a hide and seek.*
*Now you love me, now you tease,*
*I am pretty, so you say.*
*What are you really thinking, please?*

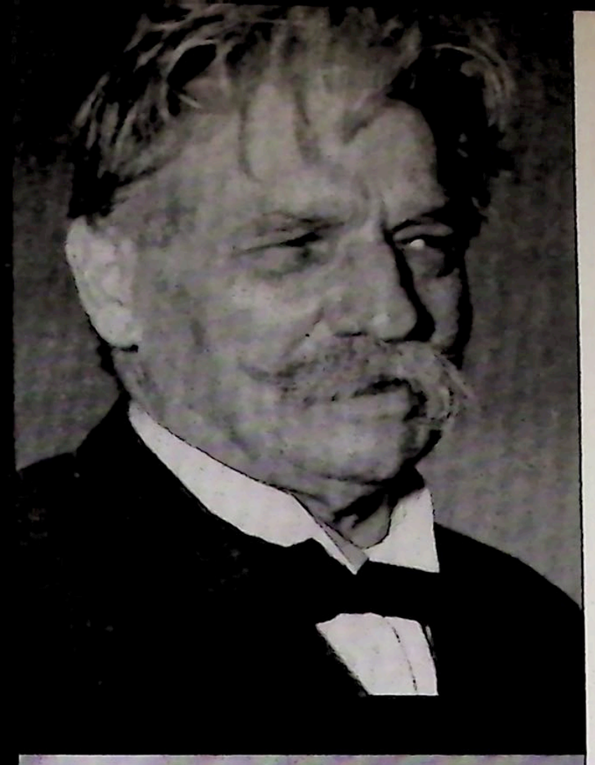
*I am the flower, loveliest.*
*I am the belle of all.*
*But I will laugh and run away,*
*If I hear love's call.*

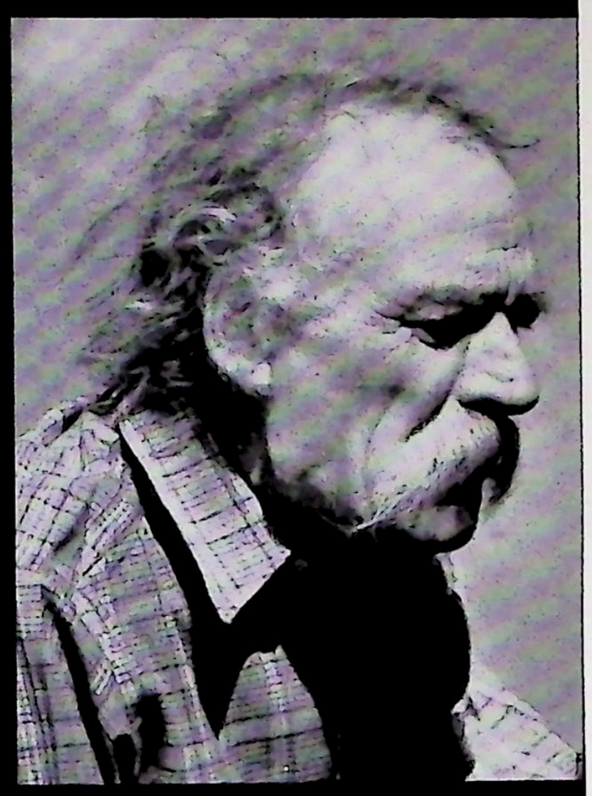
*Is the dance beginning*
*Or the ending now we see?*
*Only the rhythmic heart can know*
*Beauty's eternity.*

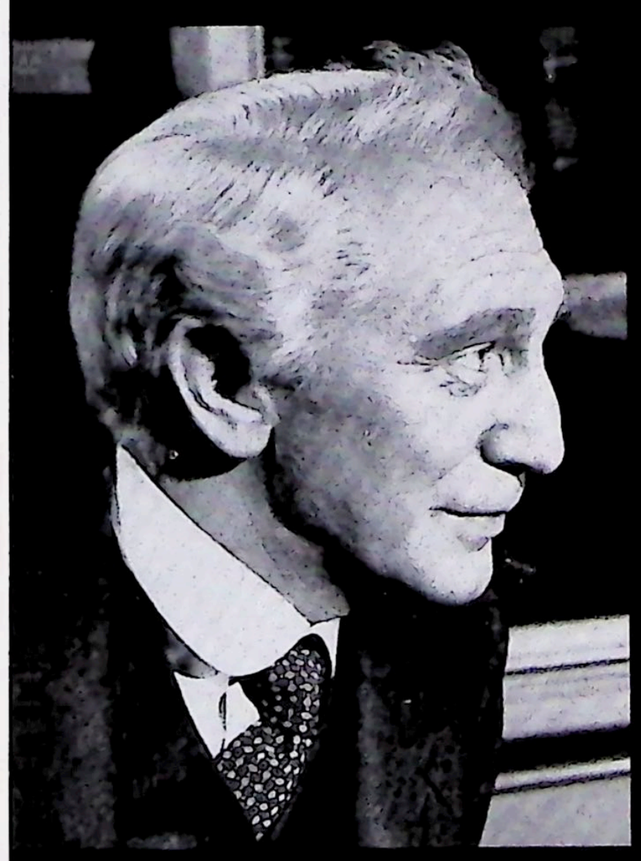


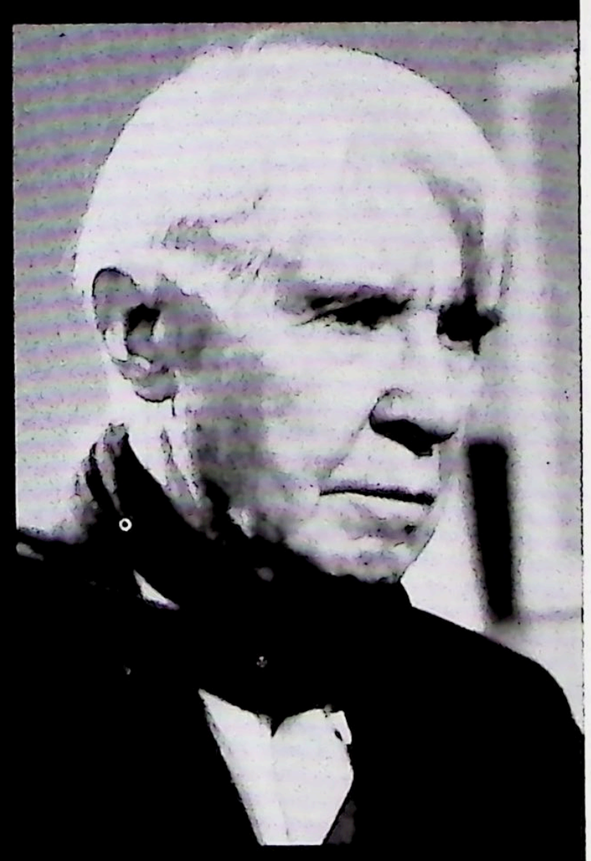
# the aging of man

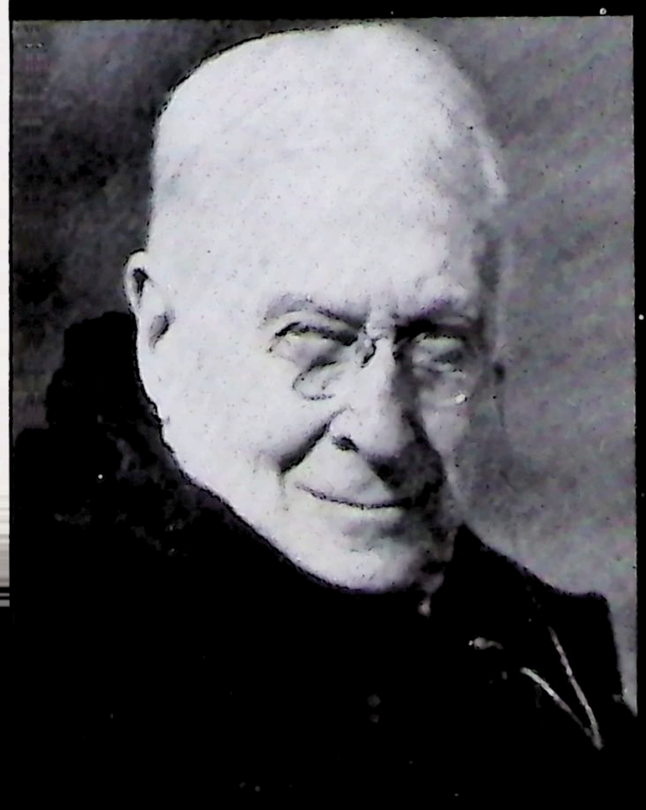
*A man not old, but mellow, like good wine.*— STEPHEN PHILLIPS

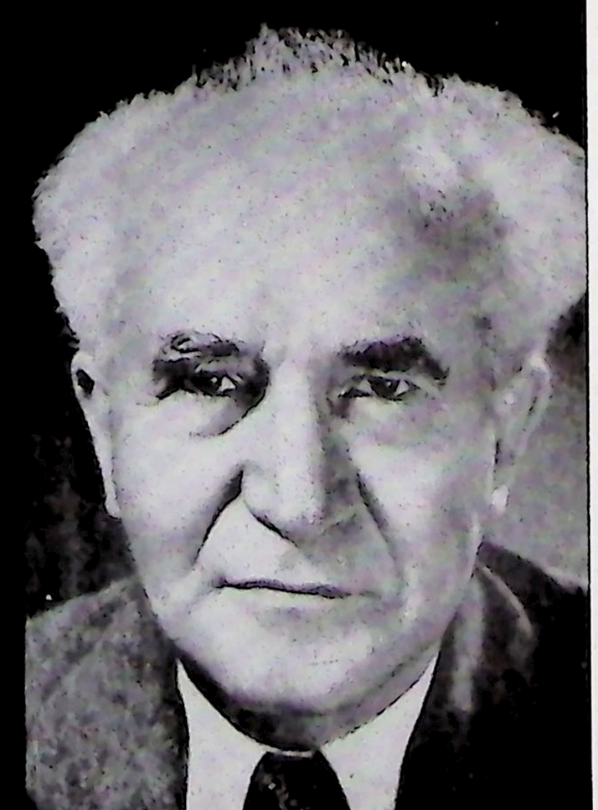












*from the Wisdom of Encyclopedia Americana*

SCIENCE in its present state of development can supply no single law governing longevity. There may exist some relationship between longevity and the simplicity of bodily constitution, but we have too little information on the life span of the lesser animals to be able to draw such an inference. However, it is certain that among the vertebrates, rising in the scale from fish to reptiles, then from reptiles to birds, and from the latter to mammals, the more complicated and highly developed the organisms, the briefer becomes the life span. Fish and reptiles live longer than birds, and among the latter some attain an age much greater than that of the mammals. The pike caught near Heilbronn in 1230 which lived 267 years is often cited as an example of piscine longevity. Carps reach an age of 150 years. Tortoises can survive for two centuries, and the life span of the great snakes and crocodiles is also very long. Among the birds, parrots live to 100 years, crows to 70, the wild goose to 80, the domesticated swan to 70 years. Eagles have been reported as living to 110 and 118 years, while falcons can reach an age of 160 years. Birds, however, never live to the great age of crocodiles and tortoises.

The length of the life span diminishes as we rise in the scale to the level of the mammals. Among the latter, aside from man, the elephant is the longest-lived, capable of attaining an age of 100 years, though seldom reaching it. Horses rarely live for 50 years; camels, 40; cattle, 30; sheep, 12 to 14, which for them represents extreme old age. The carnivorous beasts have even shorter lives. Man alone, despite that his organism presents the nearest approach toward perfection, can attain an age beyond any observed among other mammals. Centenarians in the human species are by no means as rare as is generally believed. In France approximately 150 persons aged 100 years or more die every year, and in that respect France is not the most favored nation.

Without harking back to distant epochs when legend often colored the truth, authentic cases are on record of longevities beyond 140 years. Saint Kentigern, the 6th century British missionary and patron saint of Glasgow, according to one of his biographers, died at the age of 165. Better authenticated are the cases of Drakenberg, born in 1626 in Norway, who died in 1772 at the age of 146 years; Thomas Parr (c.1483–1635), buried in Westminster Abbey, having died at the age of 152 years, 9 months; and Francois Secardi Hugo, Venetian Consul, who died at Smyrna, aged 114 years, 10 months and 12 days.

It may be stated that attainment of the age of 140 is not at all incompatible with the constitution of the human body and, indeed, scientific data exists to support the affirmation. Numerous studies have been made to discover the laws governing life duration. Buffon wrote that "the total duration of life can be measured to some extent by that of the duration of growth," and since the time required for an animal to attain its normal full growth is precisely determined in each of the species, it is possible to calculate the life span in each case.

As a matter of fact, the animal species can only attain certain fixed statures approximately invariable. To attain these normal full growths requires a certain number of years which also have been definitely calculated. Consequently the longevity of each individual species can be deduced and exactly determined from these basic data. Buffon was so convinced of it that he believed "that the duration of life depends neither

on the constitution nor habits, nor the quality of nutrition, that nothing can change the laws of the mechanism that regulates the number of our years, and that the life span can scarcely be altered except by excess of nourishment, or too low a diet."

Basing his theory on this principle, Buffon asserted that the life span is from six to seven times longer than the period of growth. Thus, the horse which reaches its growth in four years would live for 25 or 30 years; the deer requiring from five to six years to reach physical maturity lives from 35 to 40 years. As for man, assuming that he reaches his growth at the age of 14, Buffon determined his life span at between 90 and 100 years. Multiplying 14 by six or seven does indeed give us these approximate mortality ages for mankind. However, as M. J. P. Flourens very aptly observed, if Buffon was right in principle in determining longevity by the multiplication of our period of growth by six or seven, he was wrong in fixing 14 years as the growth period. As a matter of fact, the age at which our bones stop growing is about 20 years. Hence, man may normally reach the age of 120 or even 140 years, a fact which observation confirms. This law of stability of longevity in relation to the duration of growth would explain why, with some rare exceptions, very tall animals that need more time for development live longer than animals of low stature. Mice and rabbits do not live as long as cats and dogs; sheep and goats have much shorter lives than the horse and the camel, while the latter never attain the age of the elephant.

Although observation confirms Buffon's and Flourens' thesis that it is entirely possible for man to attain 140 years, very few of us ever reach that age. Aside from the high death rate of infants, the mortality rate reaches its culminating point between 70 and 75, yet that age bracket can by no means be regarded as the natural term of human life. In fact, by far the greater number of persons dying in that age group are still well preserved so far as their physical and intellectual powers are concerned, and their deaths can rarely be attributed to senile debility. The greater number die as the result of infectious maladies, pneumonia, tuberculosis, or affections of the heart, the kidneys, etc., and their deaths should be placed in the category of accidental deaths, and not of natural deaths resulting from the gradual exhaustion of the vital forces.

Geriatrics is the medical specialty concerned with the diseases of old age. The control of many of the diseases of youth has led to an increase in the population of the older age bracket. While a baby born in the United States in 1850 could expect to live for only 39 years, one born in 1957 had a life expectancy of 69 years. The great medical advances since the mid-19th century have shown ways of saving infants and have ameliorated the dangers of the infectious diseases of childhood and young adulthood.

These advances in medical and health services have been strikingly successful in combating infections, injuries, and other causes of premature death, but much less has been done to arrest the degenerative processes which lead to death at older ages. If, for example, a man had survived to age 60 in the United States in 1850, he could expect to live an additional 16 years, or to age 76. In 1957 a man aged 60 could expect to live 17 years more, or to age 77. Thus, while life expectancy at birth was 30 years greater than it had been a century before, at age 60 it was only 1 year greater.

The steady rise in the United States standard of living and higher standards of hygiene have reduced the incidence of many of the common diseases which formerly took a heavy toll of both children and adults. The discovery of such new chemotherapeutic agents as the sulfonamide drugs and the antibiotics has considerably reduced mortality from many of the infectious diseases, particularly pneumonia. This group of drugs has also made surgery safer and, therefore, more efficacious in all age groups.

Heart disease continues to be the chief killer of men and women past middle age, accounting for more deaths than all other diseases combined, including cancer. While it is still the greatest problem in medicine, conditions are not so bad as they might appear from this statement, for much progress has been made in the prevention and treatment of the disease.

Drugs for the treatment of high blood pressure are constantly being discovered by manufacturers, and several promising ones have been introduced into medicine. Strangely enough, one of the most successful of the new drugs being used effectively to lower high blood pressure is derived from a plant called *Rauwolfia serpentina* that has been known and used in India for centuries. Although Indian physicians have employed a powder from the root of this plant as a medicine since antiquity, its specific value for lowering blood pressure was not generally known until the 1950's. The effective agent of the powder, an alkaloid called reserpine, has now been isolated. In addition to this naturally occurring substance, many synthetic drugs have been developed and are being used successfully.

Surgery also has a definite place in the treatment of high blood pressure. The experiences of Dr. Reginald Smithwick of Boston show conclusively that certain kinds of high blood pressure can be successfully treated with surgery. Moreover, Dr. Claude Beck of Cleveland has developed a surgical procedure for the treatment of coronary disease that has had encouraging results, and it seems likely that this type of surgery will be more widely used.

Aside from specific diseases, the greatest enemy of old age is obesity. No person past age 30 to 35 should allow excess fat to accumulate, for there is no question but that fat persons die sooner than thin ones.

It is possible to prevent many of the degenerative or organic diseases of older age, but only if a physician is consulted in time. Every person past middle life should therefore see his physician for a complete physical examination at least once a year.

It would be interesting to make a more careful study of individuals who have reached a very advanced age, passing the century mark, to ascertain whether the analysis of the kind of lives they have led would reveal the secret of longevity. Theoretically, it would appear (and most authors dealing with the question have agreed on this point) that a well-regulated, temperate life devoid of excesses is the surest guarantee of a long existence. In support of this thesis could be adduced, to begin with, the proven fact that most centenarians are poor people, and the case of a millionaire like Sir Moses Montefiore who lived to 101 is quite exceptional. Now, since poverty is the best check against intemperance and constrains to an abstemious life, the conclusion has been drawn that it explains the longevity of more than 100 years attained by certain individuals. Unfortunately, the problem is far from being so simple and cannot be solved by merely following the precepts of the good life. As a matter of fact, although among centenarians one finds abstemious folk content to live on a bread, milk, and vegetable diet and who avoid excess in all things, one also finds many who have led tempestuous lives, who were hard drinkers, who indulged excessively in tobacco, coffee, etc. This merely proves that the secret of longevity cannot be found in sobriety. The kind of life we lead has only a slight influence and simply predisposes us either to contract or to avoid certain sicknesses; it has no direct influence on the normal duration of our lives.

The deduction we can make from all these facts is that the real cause of longevity must reside in some peculiarity of the internal constitution of certain of our organs that directly influences the length of our lives and sets a longer or shorter term to our existence. This hypothesis is further confirmed by the observation that centenarians are often found in the same family and that more often than not longevity is hereditary. Thomas Parr, already mentioned as having lived 152 years and 9 months, had a son who lived 127 years.

Inherited longevity is not by any means an indecipherable enigma. That kind of longevity depends on the glands which govern the functioning of our organs. These glands are bequeathed to us by our near or distant ancestors, just as they have bequeathed all our other organs. It is consequently quite natural that longevity should be hereditary like the color of our eyes. The child reproduces the individual characteristics of its parents, whether they be normal or abnormal. As Professor Arthur Thomson has pointed out, a strand of white hair or an extra finger can persist through several generations. A minor functional idiosyncrasy, like left-handedness, has continued through many generations. The thick lower lip of the Hapsburgs has persisted for six centuries. Various maladies can make their mark on individuals, appearing in an identical manner among descendants through many generations and living under entirely different environmental conditions. It is quite natural therefore that our ancestors have bequeathed us in the initial cell, the conceptual germ and the egg, those particular glands that determine our longevity. ♦

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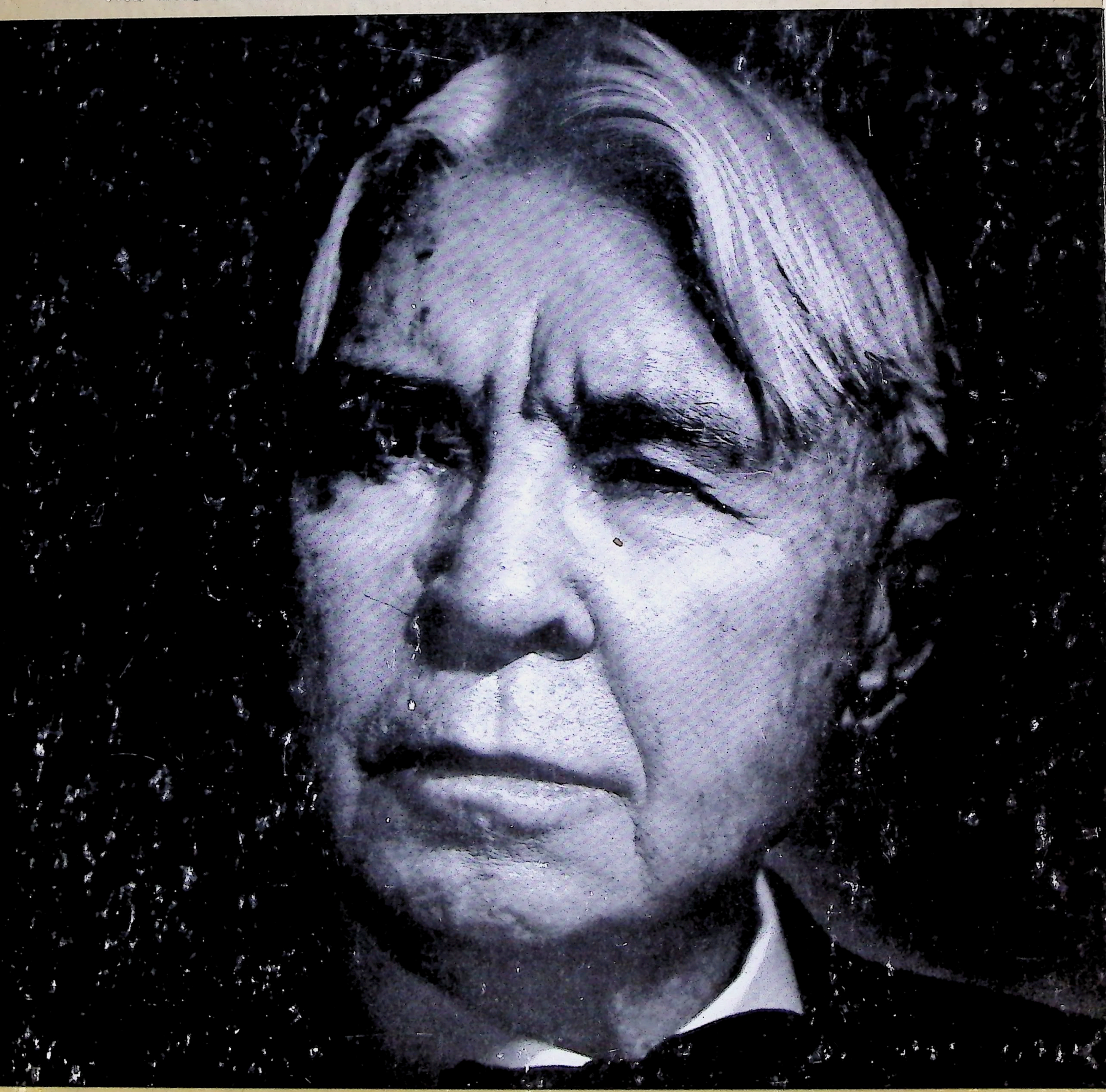

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